TUGAS AKHIR
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ANALISA GAYA GELOMBANG PADA STRUKTUR JACKET DENGAN PERCOBAAN PADA FLUME TANK

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TUGAS AKHIR

Diajukan Guna Memenuhi Persyaratan Untuk

Memperoleh Gelar Sarjana Teknik

Pada

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ABSTRAK

Penelitian ini merupakan studi eksperimental untuk mengetahui besarnya nilai koefisien drag, koefisien inersia dan koefisien lift pada silinder dan potongan kaki jacket yang membentuk sudut 0^0, 45^0, 90^0, akibat beban gelombang yang dilakukan di Laboratorium Dasar Laut dan Bawah Air (*Flume Tank*) Jurusan Teknik Kelautan ITS. Sebagai model silinder digunakan pipa PVC diameter 4 inch (10,16 cm) tipe D yang dipasang vertikal sedemikian rupa, serta model potongan kaki jacket dari PVC diameter 4 inch sebagai kakinya dan diameter 2 inch (5,08 cm) sebagai bracingnya. Percobaan dilakukan dengan variasi tinggi gelombang 2, 4, 6, 8, 10 cm dan periode 1-4 detik untuk angka Keulegan Carpenter 0.64 - 7.22. Hasil percobaan silinder menghasilkan koefisien drag sebesar 1.26 – 1.69, koefisien inersia sebesar 2.19-1.61, dan koefisien lift sebesar 0.77-2.13. Untuk potongan kaki jacket posisi 0 derajat menghasilkan koefisien drag 1.55-1.89, koefisien inersia 2.26-1.77, dan koefisien lift sebesar 0.94-2.23. Untuk potongan kaki jacket posisi 45 derajat menghasilkan koefisien drag sebesar 1.76-2.17, koefisien inersia sebesar 2.33 – 1.89, sedangkan koefisien lift berkisar antara 1.27-2.42. Untuk potongan kaki jacket posisi 90 derajat koefisien drag sebesar 1.85-2.34, koefisien inersia berkisar 2.41-2.04, dan koefisien lift 1.54-2.67. Secara keseluruhan grafik menunjukkan kecenderungan kenaikan koefisien drag dengan kenaikan KC, dan terjadi penurunan koefisien inersia dengan bertambahnya nilai KC, sedangkan Koefisien lift menunjukkan kenaikan dengan naiknya angka Keulegan Carpenter.

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"Assalaamu alaaikum waarahmatullaahi waabarakaatuh."

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Penulis

DAFTAR ISI

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DAFTAR GAMBAR

DAFTAR NOTASI

Bm : Lebar model

Bp : Lebar prototype

Cd : Koefisien Drag

Cm : Koefisien Inersia

Cl : Koefisien lift/angkat

D : Diameter struktur

d. : Kedalaman perairan

F : Gaya total

FD : Gaya drag

FI : Gaya inersia

FL : Gaya lift

g. : Percepatan gravitasi bumi 9.81 m/det2

H : tinggi gelombang

KC : Angka Keulegan Carpenter

k. : Angka gelombang

Lm : Panjang model

Lp : Panjang prototipe

Re : Angka Reynold

T : Periode gelombang

Tm : Tinggi model

Tp : Tinggi Prototype

t. : Waktu

λ : Panjang gelombang

π : Phi = 3.14

ρ : Massa jenis air

υ : Viskositas Kinematis

η : Profil permukaan gelombang

"Kemustahilan-kemustahilan yang masuk akal akan selalu lebih baik dari pada kemungkinan- kemungkinan yang tidak masuk akal"

Aristoteles

BAB I
PENDAHULUAN

BAB I

PENDAHULUAN

1.1. Latar Belakang

Terus bertambahnya kebutuhan energi dunia terutama minyak bumi dan gas telah mendorong penanaman modal dalam industri eksplorasi minyak dan gas. Kebanyakan tambang migas baru yang ditemukan berada pada daerah lepas pantai sehingga konsekwensi yang timbul adalah munculnya masalah-masalah teknis baru dalam pengembangan *platform* untuk pengeboran dan produksi.

Kondisi lingkungan yang tidak bersahabat dimana tambang minyak berada dan besarnya ukuran dari struktur lepas pantai untuk melakukan eksploitasi, serta beban lingkungan yang terbesar dari struktur adalah gelombang dibandingkan dengan beban lingkungan yang lain menyebabkan analisa-analisa teknis untuk struktur tersebut menjadi terbatas pemakaianya. Tes model dalam skala besar memakan biaya yang besar, oleh karena itu analisa-analisa terhadap model dipakai oleh *engineer* sebagai petunjuk dalam mendesain. Seiring dengan eksplorasi kelaut dalam maka teknologi yang dibutuhkan untuk mendukung kegiatan ini harus dilanjutkan ketingkat yang lebih canggih melalui penelitian dan pengembangan.

Struktur lepas pantai biasanya memiliki kaki utama dan bracing berupa silinder yang dilas menjadi satu kesatuan pada kondisi ini beban hidrodinamis bekerja pada struktur yang terendam dibawah permukaan air dengan keadaan yang sedemikian rupa. (Sharpkaya,1981)

Dalam eksperimen sangat sulit untuk mewujudkan model sesuai dengan struktur dan lingkungan yang sesunguhnya, kebanyakan eksperimen dilakukan

dengan asumsi bahwa kondisi gelombang adalah ideal, sedangkan struktur yang sesungguhnya adalah dengan kondisi yang kompleks. Data-data eksperimental yang berhubungan dengan gaya-gaya hidrodinamis sangatlah terbatas sehingga perlu kiranya diadakan penelitian terhadap arah aliran yang membentuk sudut dengan model.

Ketika fluida melewati suatu struktur, terjadi perubahan gaya- gaya hidrodinamis tergantung pada karakteristik fisik dari struktur tersebut. Untuk mengestimasi beban yang bekerja pada elemen struktur jacket yang terkena beban gelombang sering digunakan rumus Morison. Dalam hal ini gaya total yang bekerja pada elemen struktur jacket akibat gelombang dibagi menjadi dua komponen yaitu gaya drag dan inersia. Gaya drag berkaitan dengan kecepatan partikel air dan fasenya serta gaya inersia yang merupakan gaya *Froude krylov* dan massa tambah dari silinder yang sefase dengan percepatan. Sedangkan gaya angkat bekerja tegak lurus terhadap kecepatan partikel air yang melewati silinder.

Koefisien gaya hidrodinamis dapat ditentukan dengan percobaan pada model dengan skala kecil dengan simulasi pada kondisi lingkungan mendekati keadaan sebenarnya. Secara prinsip dapat juga menghitung koefisien hidrodinamis dengan perumusan yang telah ada atau data-data ynag telah ada.

Atas dasar tersebut maka dalam tugas akhir ini akan dilaksanakan percobaan untuk menentukan koefisien gaya-gaya hidrodinamis khususnya koefisien drag , inersia serta koefisien gaya angkat terhadap model. Dengan judul tugas akhir sebagai berikut:

"ANALISA GAYA GELOMBANG PADA STRUKTUR JACKET DENGAN PERCOBAAN PADA FLUME TANK"

1.2. Perumusan Masalah

Permasalahan yang timbul adalah sebagai berikut :

1. Berapa besar koefisien *drag, inersia* serta *lift* yang terjadi pada silinder dan hubungannya terhadap KC secara kualitas dan kuantitas?
2. Berapa besar koefisien *drag, inersia* serta *lift* yang terjadi pada potongan kaki jacket dengan posisi model 0 °, 45°, 90° dari hasil percobaan.

1.3. Tujuan

Studi ini bertujuan untuk :

1. Mengetahui besar koefisien *drag, inersia* serta *lift* yang terjadi pada silinder dan hubungannya dengan KC secara kualitas dan kuantitas?
2. Mengetahui besar koefisien *drag, inersia* serta *lift* yang terjadi pada potongan kaki jacket dengan posisi model 0 °, 45°, 90° dari hasil percobaan.

1.4. Manfaat

1. Memberikan kontribusi mengenai nilai koefisien drag, inersia dan lift pada silinder dari hasil percobaan
2. Memberikan masukan nilai koefisien drag,inersia dan lift dengan variasi sudut pada model

1.5. Batasan Masalah

Agar lebih memudahkan analisa dan dapat dicapai tujuan yang diharapkan, maka perlu diberikan batasan-batasan sebagai berikut :

1. Percobaan dilakukan dengan memanfaatkan fasilitas *flume tank*, Jurusan Teknik Kelautan, ITS – Surabaya.

2. Pengaruh antar elemen pada model tidak dihitung, tidak ada pengaruh arus, angin dan silinder dianggap *smooth.*
3. Gelombang *reguler*, dengan variasi tinggi gelombang dan periode.
4. Kedudukan pipa dalam tanki dianggap selalu dalam keadaan rigid, dalam artian tidak ada respon dinamis, serta jarak antar kaki tetap.
5. Penggunaan silinder PVC 4 dan 2 inch sebagai model elemen dari struktur *jacket.*

1.6. Metodologi dan Model Analisis

Studi eksperimental dilakkukan di laboratorium Flume Tank jurusan Teknik Kelautan ITS , model yang digunakan terdiri dari satu pipa uji tegak, dan dua buah silinder dengan bacing konfigurasi K, yang merupakan model potongan jacket. Model seluruhnya dibuat dari bahan pipa PVC/ Paralon tipe D. Model potongan jacket struktur diuji dilaboratorium dengan arah gelombang 0^0 (*head sea*) kemudian model diputar 45^0 , 90^0 .

Gelombang yang digunakan adalah gelombang sinusoidal yang dibangkitkan oleh pembangkit gelombang yang tersedia sesuai dengan rentang frekuensi tertentu dan tinggi gelombang tertentu yang umum digunakan.

Pengukuran gaya total dilakukan dengan menggunakan *strain gauges*, dan dikalibrasi sedemikian rupa sehingga pembacaan dapat dilakukan dengan secermat mungkin.

Dari gaya total yang terukur dari percobaan selanjutnya dapat ditentukan kecepatan dan percepatan dengan menggunakan teori gelombang linear. Hasil-hasil dari eksperimen tersebut dimasukkan kedalam persamaan Morison, untuk

menentukan koefisien gaya drag dan inersia, serta menggunakan rumus *lift* untuk menentukan koefisien angkat/*lift*.

1.6. Sistematika Penulisan

Untuk menyelesaikan tugas akhir ini, menggunakan sistematika penulisan sebagai berikut :

Bab I Pendahuluan

Diuraikan mengenai dasar pemikiran latar belakang yang melandasi penelitian ini, perumusan masalah dan tujuan yang hendak dicapai, batasan masalah serta metodologi penulisan.

Bab II.Dasar Teori

Dalam bab ini diuraikan mengenai persamaan-persamaan yang digunakan dalam perhitungan, formulasi perhitungan gaya drag dan inersia, dan lift serta pemilihan teori gelombang yang sesuai untuk digunakan.

Bab III. Metodologi Penelitian

Berisi tentang urutan langkah dalam penyelesaian tugas akhir ini, mulai dari studi literatur, perhitungan teoritis, persiapan dan proses percobaan, analisa data sampai dengan penarikan kesimpulan hasil percobaan.

Bab IV. Hasil dan Pembahasan

Dalam bab ini diuraikan mengenai perhitungan dan analisa data berikut grafik-grafiknya yang diperoleh dari percobaan dan perhitungan,

Bab V. Kesimpulan dan Saran

Berisi kesimpulan dari hasil percobaan dan saran-saran untuk penyempurnaan hasil percobaan.

"Orang-orang yang besar adalah bukan orang-orang yang otaknya sempurna, melainkan orang-orang yang dapat mempergunakan yang terbaik dari otaknya yang tidak sempurna"

Aristoteles

BAB II
DASAR TEORI

BAB II

DASAR TEORI

2.1. Tinjauan pustaka dan Dasar teori

2.1.1. Tinjauan Pustaka

Aliran *oscilatory* yang melewati silinder telah diselidiki untuk keperluan industri lepas pantai karena kebanyakan bangunan lepas pantai berupa silinder yang dilas menjadi struktur jaket. Sarpkaya (1976) dan Indiyono (1996) mengadakan eksperimen dalam suatu tempat yang disebut *U – Tube water tunnel* dengan model dua dimensi untuk mengetahui besar gaya yang bekerja pada silinder dengan aliran *oscilatory* yang merupakan gambaran dari aliran gelombang, kemudian dicari Koefisien hidrodinamis yang terjadi terhadap angka KC. Eksperimen pada U-Tube menghasilkan *curve* Cd, Cm, Cl yang diplotkan pada *range* angka KC yang berkisar antara 3-30. Bearman dan Graham (1979) juga melakukan percobaan dalam U-Tube untuk menganalisa gaya *in-line* dan gaya *transverse* pada beberapa silinder *bodies* pada angka KC yang berkisar dari 3-70.

2.1.2. Beban Gelombang

Beban gelombang yang diderita *platform* mempunyai sifat dinamis akan tetapi dalam perancangan umumnya menggunakan perhitungan statis kecuali pada perairan yang cukup dalam dimana selama operasi struktur paltform akan mengalami kecenderungan untuk bersifat lentur, untuk kasus demikian analisa statis tentunya tidak sesuai digunakan lagi.

Dari segi arah maupun kedinamisannya, beban gelombang merupakan yang terbesar dibandingkan beban arus dan angin. Tiga diantara berbagai parameter pokok yang menentukan pemilihan metode pendekatan atau prosedur untuk perhitungan beban gelombang adalah geometri struktur, panjang gelombang, tinggi gelombang. Ketiga parameter tersebut umumnya dinyatakan dalam bentuk perbandingan yaitu :

A. Perbandingan antara geometri struktur dengan panjang gelombang.

B. Perbandingan antara tinggi gelombang dengan geometri struktur.

Kedua pernyataan diatas dapat diekspresiakan sebagai berikut :

A. Perbandingan antara diameter struktur dengan panjang gelombang (D/λ), perbandingan ini menyatakan ukuran struktur relatif terhadap gelombang, yang mempunyai pengertian sampai sejauh mana pengaruh struktur tersebut dengan karakteristik gelombang yaitu :

   1) Untuk $D/\lambda \leq 0.2$, struktur dianggap kesil jika dibandingkan dengan panjang gelombang , sehingga struktur tersebut tidak mempengaruhi atau merubah karakteristik gelombang yang mengenainya untuk kasus seperti ini perhitungan gelombang dapat digunakan Teori Morison.

   2) Untuk $D/\lambda \geq 0.2$, geometri dari struktur dianggap cukup besar, sehingga mempengaruhi karakteristik gelombang yang mengenainya, ini berarti refleksi dan radiasi dari energi gelombang akibat interaksi antara struktur dengan gelombang harus diperhitungkan, untuk kasus ini Teori Morison tidak dapat dipakai, pendekatan yang dipakai adalah teori Difraksi.

B. Perbandingan antara tinggi gelombang dengan geometri struktur (H/D)

1) Untuk (H/D) kecil (H / D < 1,5), diameter orbit partikel yang terjadi juga kecil, ini berarti bahwa aliran searah yang timbul pun juga kecil, sehingga tidak mampu untuk menimbulkan pemisahan aliran maupun pusaran. Dalam hal ini gaya drag yang terjadi sangatlah kecil sehingga yang dominan adalah gaya inersia.

2) Untuk (H/D) yang besar (H / D > 8), aliran searah yang timbul juga besar, sehingga dibelakang struktur aliran tersebut akan mengalami pemisahan dan timbul pusaran, dalam hal ini maka yang dominan adalah gaya drag.

2.1.3. Teori Gelombang Linear (Airy)

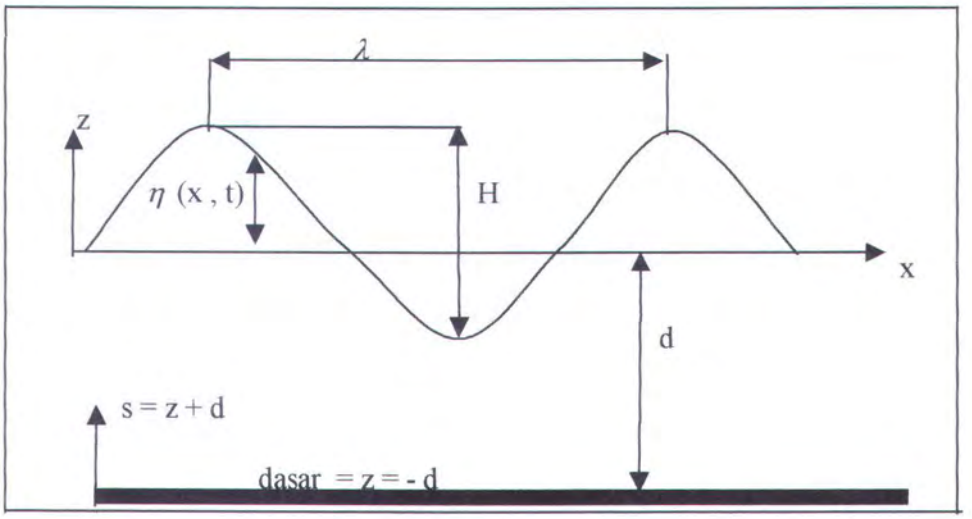
Dalam perhitungan gaya gelombang dengan menggunakan teori Morison, maka akan ditemui komponen kecepatan dan percepatan yang harus diperhitungkan dahulu. Untuk menghitung kecepatan dan percepatan dipakai teori gelombang, teori gelombang dibedakan secara matematis menjasi dua buah yaitu teori gelombang linear (Airy) dan teori gelombang non linear. Berikut ini akan diuraikan mengenai **Teori Geombang Linear Airy** dipakai untuk perhitungan kecepatan dan percepatan gelombang untuk menyelesaikan persamaan yang ada.

Teori ini relatif sederhana, pertama kali dikembangkan oleh G.B Airy pada tahun 1842, menurut Wilson (1984) dari Saifudin (1999) teori ini mengasumsikan:

1. Bentuk gelombang sinusoidal, dimana amplitudo gelombang relatif kecil dibanding panjang gelombang dan kedalaman air.
2. Kedalaman perairan dianggap konstan.
3. Fluida adalah incompressible dan homogen.

4. Fluida inviscid dan irrotasional
5. Tegangan permukaan diabaikan dan gesekan dasar diabaikan.
6. Dasar perairan dianggap rata dan kedap.

Karena umur dari teori ini sudah lebih dari satu abad, maka sudah banyak literatur yang menguraikan penurunannya, berikut ini akan ditunjukkan persamaan- persamaan yang sering digunakan dalam persamaan Airy,



Gambar2.1 Profil gelombang regular (Bhatthacaryya,1978)

Keterangan :

H = *wave height*/ tinggi gelombang

λ = panjang gelombang

ζ = Amplitudo

H / λ = stenlness / kemiringan gelombang

T = periode gelombang

F = frekwensi gelombang

c = λ / T *velocity* (kecepatan gelombang)

Untuk mendefinisikan kondisi batas kinematis dan dinamis maka:

$$\frac{\partial^2 \phi}{\partial x^2} + g\frac{\partial \phi}{\partial z^2} = 0 \quad pada\ saat\ z = 0 \tag{2.1}$$

$$\eta = -\frac{1}{g}\left(\frac{\partial \phi}{\partial t}\right)_{z=0} \tag{2.2}$$

dan kecepatan potensialnya :

$$\phi = \frac{g\,d}{2\omega}\frac{\cosh(ks)}{\cosh(kd)}\sin\theta \tag{2.2}$$

dengan $\theta = (kx - \omega t)$ *dan* $s = (z + d)$

$$c = \frac{\omega}{k} = \frac{2\pi\ L}{T\,2\pi} = \frac{L}{T} \tag{2.3}$$

Profil permukaan gelombang

$$(\eta) = H/2 \cos (kx - \omega t) \tag{2.4}$$

$$k = \frac{2\pi}{\lambda} \tag{2.5}$$

$$\omega = 2\pi/T \tag{2.6}$$

$$\omega^2 = gk \tanh kd \tag{2.7}$$

Kecepatan horisontal u dan kecepatan vertikal v dari partikel air pada posisi (x,z) dan waktu t diekspresikan sebagai berikut:

$$u = \omega H/2\ \frac{\cosh k(z+d)}{\sinh kd}\ Cos\ (kx - \omega t) \tag{2.8}$$

$$v = \omega H/2\ \frac{\sinh k(z+d)}{\sinh kd}\ Sin\ (kx - \omega t) \tag{2.9}$$

Percepatan horisontal a_x dan percepatan vertikal a_z dapat diperoleh dari penurunan u dan v diatas terhadap waktu sehingga diperoleh:

$$a_x = \frac{du}{dt} = \omega^2\ H/2\ \frac{\cosh k(z+d)}{\sinh kd}\ \sin\ (kx - \omega t) \tag{2.10}$$

$$a_z = \frac{dv}{dt} = -\omega^2 \; H/2 \; \frac{\sinh k(z+d)}{\sinh kd} \cos(kx - \omega t) \qquad (2.11)$$

dimana :

ax = percepatan horizontal air pada koordinat (x,z) dari suatu kedalaman d

az = percepatan vertikal air pada koordinat (x,z) dari suatu kedalaman d

2.2. Persamaan Morison

Untuk menghitung besarnya gaya gelombang pada suatu struktur bangunan lepas pantai, yang umumnya tersusun atas pipa silinder baik horisontal maupun vertikal, ada beberapa macam cara yaitu dengan menggunakan persamaan Morison, teori Froude Krylov atau dengan menggunakan teori Difraksi. Persamaan Morison mengasumsikan gaya gelombang tersusun atas gaya drag dan Inersia yang dijumlahkan bersama secara linear. Morison *et.all* pada tahun 1950 telah melakukan serangkaian percobaan untuk menghitung besarnya gaya horisontal akibat gelombang dan arus pada silinder vertikal/tegak. Melalui percobaan ini Morison berhasil mendapatkan persamaan yang dapat digunakan untuk menghitung besarnya gaya horisontal per satuan panjang silinder vertikal, ekspresi matematis gaya persamaan morison adalah sebagai berikut :

$$F_T = \frac{1}{2} C_d \rho D u|u| + C_M \rho \pi \frac{D^2}{4} \frac{du}{dt} \qquad (2.12)$$

Dengan pembagian gaya menjadi dua komponen yaitu gaya drag dan inersia seperti diuraikan sebagai berikut:

1. Gaya drag (*Drag Force*)

   Gaya ini disebabkan oleh pengaruh viskositas air, merupakan bagian yang berbanding lurus dengan kwadrat dari kecepatan relatif partikel air terhadap silinder ke arah horizontal (u), gaya drag persatuan panjang adalah :

   $$F_D = (0{,}5\ Cd\ \rho\ D\ u\ |u| \qquad (2.13)$$

   Cd = koeffisien *drag*.

   D = Diameter silinder

   ρ = massa jenis air

2. Gaya Inersia (*Inertia Force*)

   Gaya yang tidak tergantung dari viskositas air dan merupakan susunan dari dua bagian, yaitu :

   a. Gaya massa tambah hidrodinamis atau *virtual mass* silinder adalah massa dari fluida yang bergerak disekeliling silinder sehingga timbul percepatan relatif fluida terhadap benda benam, sehingga meningkatkan massa nyata dari silinder selanjutnya berakibat pada kenaikan gaya.

   b. Gaya Frode Krylov pada hakekatnya adalah gaya yang diperlukan untuk mempercepat volume fluida yang dipindahkan oleh benda sebesar percepatan fluida disekeliling silinder, percepatan fluida yang melewati silinder akan timbul medan gaya bertekanan / gradien tekanan pada permukaan silinder melalui suatu distribusi tekanan (Sutomo, J, 1995). Sehingga gaya Froude Krylov persatuan panjang adalah

   $$F_K = \rho \pi \frac{D^2}{4} \frac{du}{dt} \qquad (2.14)$$

maka gaya inersia persatuan panjang:

$$F_I = \rho\pi \frac{D^2}{4} C_a \frac{du}{dt} + \rho\pi \frac{D^2}{4} \frac{du}{dt} \qquad (2.15)$$

$$F_I = (C_a + 1)\, \rho\pi \frac{D^2}{4} \frac{du}{dt} \quad dengan \quad (C_a + 1) = C_M \qquad (2.16)$$

C_a merupakan koefisien massa tambah silinder

$$F_I = C_M\, \rho\pi \frac{D^2}{4} \frac{du}{dt} \qquad (2.17)$$

dengan C_M = koefisien inersia

Pada beban gelombang koefisien inersia dipengaruhi oleh angka Reynold (Re) dan juga angka Keulegan Carpenter (KC) rumusan Re dan KC adalah:

$$Re = \frac{uD}{\upsilon} \qquad (2.18)$$

$$KC = \frac{uT}{D} \qquad (2.19)$$

Dimana :

u = kecepatan partikel air

D = diameter silinder

T = periode gelombang

υ = Viskositas kinematis air

Ada beberapa asumsi yang dipakai dalam pemakaian rumus morison diantaranya adalah :

◊ Karakteristik gelombang tidak terganggu oleh adanya struktur, hal ini berarti bahwa diameter struktur relatif kecil dibandingkan dengan panjang gelombang $D/\lambda \leq 0{,}2$.

◊ Kecepatan dan percepatan partikel air yang ada dalam persaman Morison dihitung dengan teori gelombang berdasarkan pada *region of validity*

◊ Gaya angkat tidak diperhitungkan.

◊ Gaya pada silinder yang terbenam dinyatakan sebagai jumlah dari gaya drag dan inersia yang masing- masing gaya dapat dihitung secara terpisah.

Sehingga untuk mendapatkan nilai koefisien drag maupun inersia adalah :

$$Cd = Fd / (0{,}5\ \rho\ U^2\ D) \qquad (2.20)$$

$$Cm = Fi / (0{,}25\ \rho\ \pi \dot{u}\ D^2) \qquad (2.21)$$

2.3. Transverse Force

Gaya *lift* atau disebut juga gaya *transverse* diformulasikan oleh (Mouselli,1981) merupakan gaya transversal yang bekerja pada struktur dibawah air yang tegak lurus dengan arah aliran, dan perumusannya sebagai berikut:

$$Fl = \frac{1}{2}\rho Cl\ DU^2 \qquad (2.22)$$

Dimana :

Fl = gaya angkat per satuan panjang

Cl = koefisien lift

ρ = massa jenis air

D = diameter silinder

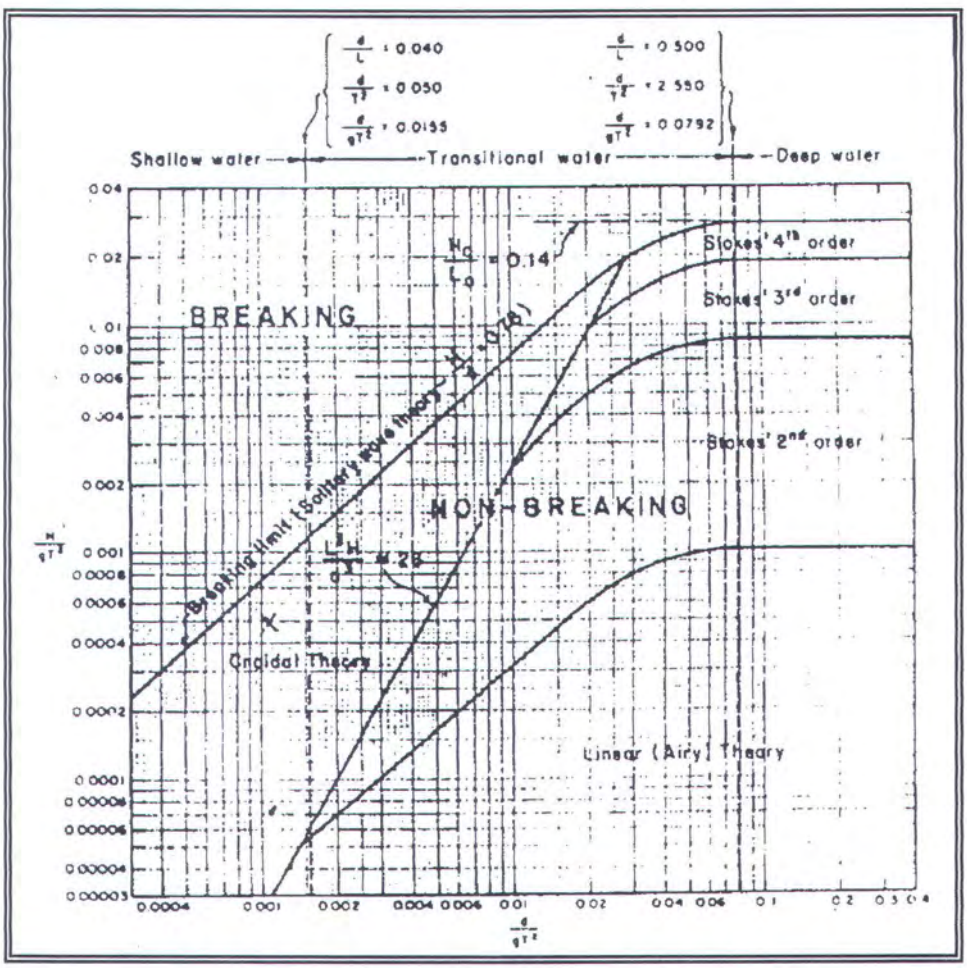
U = kecepatan partikel air

Sehingga untuk mendapatkan nilai koefisien lift adalah :

$$Cl = Fl / (0{,}5\ \rho\ U^2\ D) \qquad (2.23)$$

2.4. Region of validity

Dalam menyelesaikan persamaan-persamaan Morison , ada komponen–komponen yang harus diselesaikan dahulu yaitu komponen kecepatan dan percepatan gelombang. Untuk menentukan teori mana yang paling sesuai dalam menyelesaikan kecepatan dan percepatan maka digunakan region of validity (Chakrabarti,1987), yang disajikan dalam bentuk grafik berikut ini, sebagai absis dari garfik ini adalah d/T^2 dan ordinatnya adalah H/T^2 dimana d adalah kedalaman perairan, T adalah periode gelombang, H adalah tinggi gelombang , grafik tersebut ditunjukkan oleh gambar 2.2.



Gambar 2.2 Daerah *region validitas* (Chakrabarti.SK,1987)

2.5. Hukum kesamaan

Untuk mengidealisasikan suatu model agar mendekati keadaan yang sebenarnya, perlu adanya syarat-syarat kesamaan (Murtedjo,1995) antara lain :

❖ Kesamaan geometris (Geometric Simialirity)

Kesamaan geometri adalah kesamaan perbandingan antara ukuran model dengan prototype, harga perbandingan ini selalu bernilai konstan, secara matematis dapat ditulis sebagai berikut :

$$\lambda_1 = \frac{Lp}{Lm} = \frac{Bp}{Bm} = \frac{Tp}{Tm} = \text{konstan} \qquad (2.24)$$

Lp = panjang sesungguhnya Lm = panjang model

Bp = Lebar sesungguhnya Bm = lebar model

Tp = Tinggi sesungguhnya Tm = Tinggi model

λ_1 = konstanta (prototype/model)

❖ Kesamaan Kinematis (Kinematic Simialirity)

Kesamaan kinematic adalah kesamaan perbandingan antara kecepatan prototype dengan kecepatan model terhadap suatu titik, secara matematis dapat ditulis sebagai berikut :

$$\frac{Vm}{\sqrt{g\,Lm}} = \frac{Vp}{\sqrt{g\,Lp}} \qquad \text{Fn}_{\text{model}} = \text{Fn}_{\text{prototype}} \qquad (2.25)$$

$$\frac{Vm\,Lm}{\upsilon m} = \frac{Vp\,Lm}{\upsilon p} \qquad \text{Re(m)} = \text{Re(p)} \qquad (2.26)$$

Vm = Kecepatan model

Vp = Kecepatan Prototype

Fn = Froude number

Re = Reynold Number

υm = viskositas kinematis model

υp = viskositas kinematis prototype

❖ Kesamaan dinamis

Kesamaan dinamis adalah jika dua sistem dinamis mempunyai rasio yang sama, gaya gaya yang bekerja pada elemen fluida meliputi gaya gravitasi (Fg) gaya tekan (Fp) gaya viskositas (Fv) gaya elastisitas (Fe) dan gaya inersia (Fi) secara matematis dapat ditulis:

$$\frac{Fg(p)}{Fg(m)}=\frac{Fp(p)}{Fp(m)}=\frac{Fv(p)}{Fv(m)}=\frac{Fe(p)}{Fe(m)}=\frac{Fi(p)}{Fi(m)} \qquad (2.27)$$

2.6. Aliran oscilatory

Aliran oscilatory merupakan aliran yang identik dengan aliran gelombang, pada sekitar silinder aliran ini hampir selalu terpecah akibat dari gerakan fluida yang kompleks dan hal ini secara analisis tidak dapat ditunjukkan, tetapi dengan efek visualisasi pada proses percobaan hal tersebut dapat dilihat (Milne-Thomson, 1978).

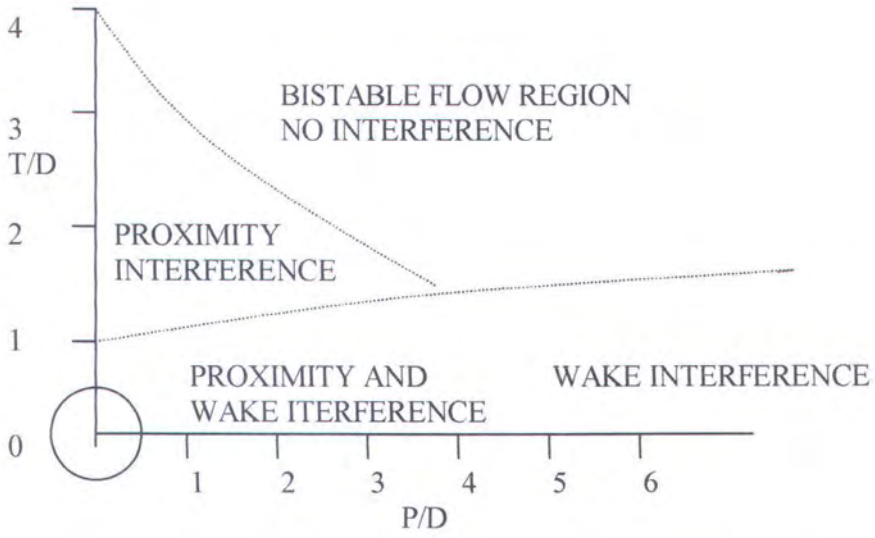
Pada visualisasi aliran *wave induced flows* adalah beberapa atau semua dari *vortice* digeneralisasikan oleh body silinder dan diubah menjadi pusaran yang menjalar dibelakang silinder pada *subsequent flow cycle*, energi atau gaya yang terjadi pada daerah ini terbatas dalam artian kecil (Le Mehaute,1976 dalam Indiyono, 1996).

Pada hasil eksperimen *U-Tube* diperoleh bahwa aliran *oscilatory* untuk silinder adalah sangat sensitif untuk perubahan angka KC, gaya-gaya yang dialami silinder tersebut tergantung pada perubahan *in the development* dan dipisahkan oleh *boundary layer*.

2.7. Fenomena aliran pada silinder

Offshore jacket struktur merupakan susunan dari elemen struktur silinder yang biasanya saling menutup satu sama lain. Interaksi antara gelombang laut dan susunan dari *body* ini merupakan hal yang penting. Aliran pada dua silinder yang terjadi karena beban gelombang sangatlah berpengaruh pada struktur jacket, study dari beberapa peneliti menunjukkan penelitian tersebut diantaranya adalah Sarpkaya (1976), Zdravkovich (1977) dan Indiyono (1996) dengan susunan *side by side arrangement, front-rear (tandem) arrangement,* dan membentuk sudut atau *staggered arragement* terhadap arah aliran gelombang. Pengaruh interaksi dua silinder terjadi bersamaan ketika susunan *tandem* depan belakang, maupun pada susunan *staggered* satu silinder *downstream* berada disebelah *upstream* silinder, efek ini disebut efek *wake interference* secara drastis akan mengubah aliran sebelumnya (aliran silinder *upstream*) dan menghasilkan *unexpected forces, pressure distribution* dan *vortex shedding* (Zdravkovich, 1977)

Zdravkovich (1977) dan Indiyono (1996) dalam permasalahan tersebut mengidentifikasi 4 *region* aliran pada susunan silinder, seperti tampak pada gambar 2.3



Gambar 2.3 Region pengaruh aliran pada 2 silinder

Pada regim pertama *proximity interference* bahwa pada aliran ini medan aliran silinder atau *motion* mempengaruhi aliran pada silinder selanjutnya/ lainnya hal ini terutama terjadi pada susunan *side by side* dan *staggered arrangement*.

Regim kedua adalah *wake interference* dimana aliran atau *motion* dari upstream silinder berpengaruh pada silinder *downstream* aliran ini terjadi pada kedua susunan yaitu *tandem* dan *staggered arrangement*, ketika jarak antar silinder lebih dari 4 kali diameter.

Regim ketiga adalah *proximity dan wake interference* ulekan dibelakang *upstream* silinder mempengaruhi *downstream* silinder dan dapat terjadi pada spasi yang kecil pada susunan *tandem* dan *staggered arrangement* dengan jarak silinder kurang dari 4 kali diameter.

Regim keempat adalah *no interference region* ulekan dibelakang silinder *upstream* tidak berpengaruh pada *downstream* silinder karena jarak antar silinder cukup jauh dan diasumsikan sebagai *single body*.

"Hal kecil membentuk kesempurnaan, namun kesempurnaan bukanlah hal yang kecil"

Demokritos

BAB III
METODOLOGI PENELITIAN

BAB III

METODOLOGI PENELITIAN

3.1 Study literatur

Untuk mencapai tujuan penelitian yang diinginkan, langkah pertama yang dilakukan adalah melakukan study literatur, terutama berhubungan dengan penelitian yang mengenai koefisien inersia dan drag pada struktur jacket akibat beban gelombang yang pernah dilakukan. Ternyata pada penelitian yang dilakukan mengenai koefisien inersia dan drag yang terjadi pada struktur jacket sangatlah terbatas karena kebanyakan penelitian dilakukan pada model silinder tunggal (*dummy cylinder*), sehimgga perlu kiranya diadakan percobaan untuk mengetahui koefisien inersia, drag, *lift* pada struktur jaket.

Lebih jauh , tujuan dari study literatur ini adalah untuk memperjelas dasar pemikiran dan teori serta langkah setting percobaan yang akan dilakukan di laboratorium *Flume Tank* , karena itu study literatur sangatlah penting untuk kessempurnaan proses percobaan dan hasil yang ingin dicapai. Study literatur ini dilakukan sebelum dan selama proses pengerjaan tugas akhir ini.

3.2 Persiapan Percobaan

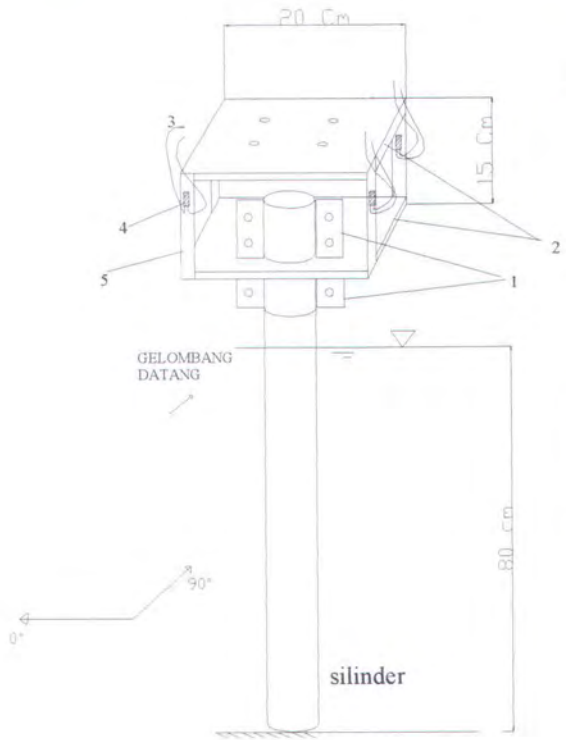
persiapan percobaan meliputi semua kegiatan yang berhubungan dengan teknis pelaksanaan sebelum dilakukan running percobaan, kegiatan tersebut meliputi persiapan bahan, penentuan ukuran dan pembuatan model, persiapan peralatan, kalibrasi dan penentuan parameter gelombang.

3.2.1 Peralatan Percobaan

3.2.1.1 Pipa uji / silinder tegak

Pemilihan pipa uji dilakukan dengan acuan bahwa dimensi pipa uji tidak menimbulkan difraksi, yaitu $D/\lambda < 0{,}2$. Untuk memperoleh kekakuan yang bagus dipilih pipa PVC/pralon dengan type D, dengan diameter 4 inchi atau sama dengan 10.16 Cm $\approx$ 10 Cm sebagai kaki dan 2 inchi atau sama dengan 5.08 Cm $\approx$ 5 Cm sebagai bracingnya.

1. Pertama dibuat satu silinder tinggi 100 Cm, yang ditutup pada 2 bagian ujungnya dengan plat PVC dan dilem dengan lem PVC sesuai diameter dalam pipa.
2. Pada bagian pipa tegak dibor dengan diameter 5 mm tiap 20 Cm, untuk menghilangkan bouyancy.



1. penjepit klam dari plat tebal 2 mm dilengkapi dengan lobang baut

2. Plat tebal 8 mm ukuran 20x20 cm untuk tumpuan plat strip tembaga, bagian bawah berlobang sebesar diameter luar silinder, bagian atas dibor untuk baut penggeras pada tumpuan/kereta

3. Kabel penghubung strain gauges dengan amplifier

4.Strain gauges

5. Plat tembaga tebal 2 mm

gambar tidak diskala

Gambar 3.1 Model silinder

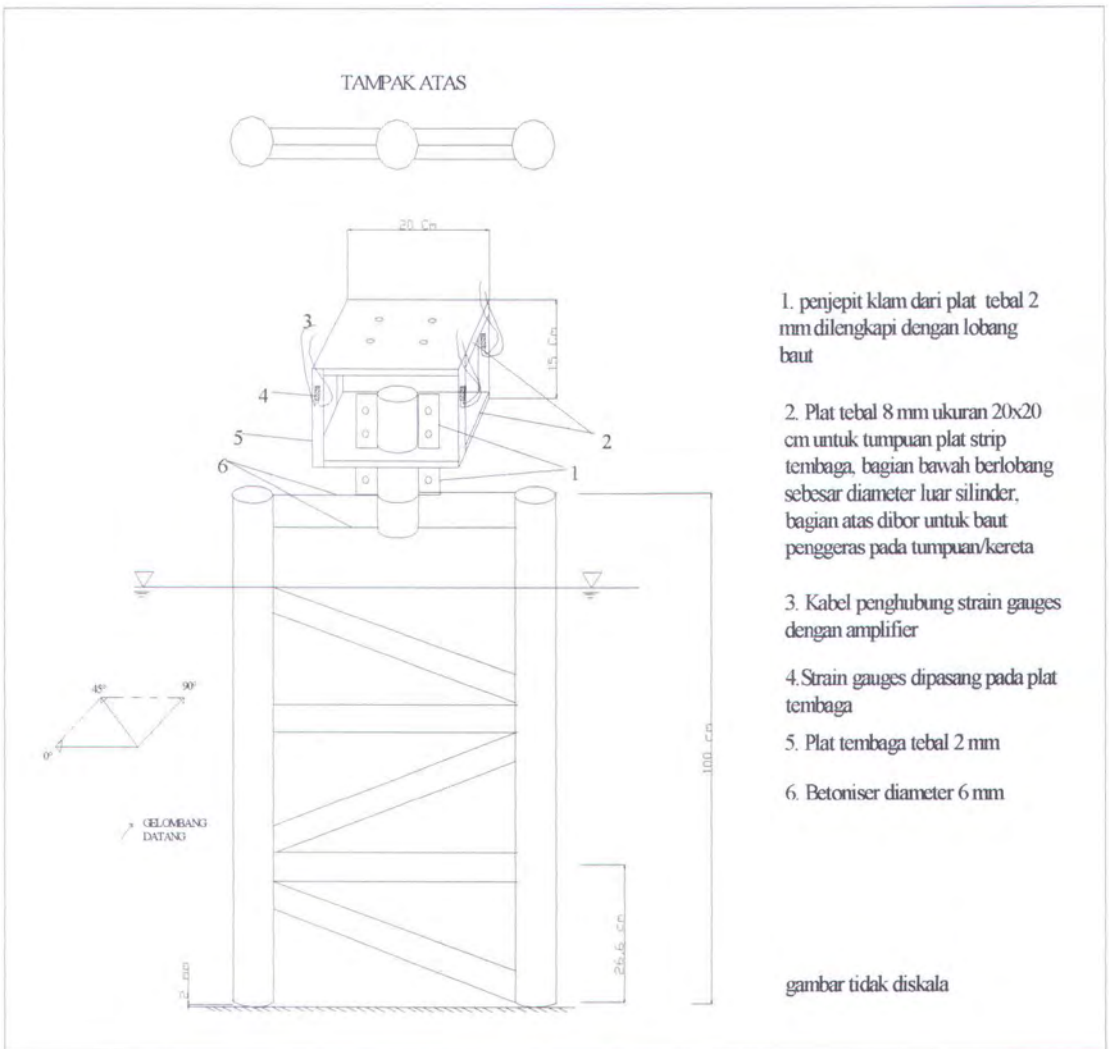
3.2.1.2 Model potongan kaki Jacket

Kemudian yang kedua membuat model potongan kaki jaket dengan langkah:

1. Model potongan kaki jaket dengan tinggi 100 Cm silinder ϕ 10.16 Cm, 2 buah
2. Potongan kaki jaket tersebut dibracing dengan ϕ 5.08 danpanjang 50.8 Cm untuk bracing horisontal pada ketinggian 26.6 Cm dan 53.2 Cm dari bawah yang disekrup serta dilem pada sisi ujungnya, sampai pada ketinggian 80 Cm dari bawah.

3. Sedangkan bracing diagonal model K, panjangnya 57.3 Cm dilem dengan lem PVC pada kedua ujungnya, penempatan ini harus pas dengan membuatkan potongan yang sesuai.
4. Pada kaki kedua bagian ujungnya ditutup dengan PVC yang datar dengan bentuk lingkaran, sebesar diameter dalam pipa uji. Tutup ujung ini dilekatkan dengan lem PVC.
5. Pada bagian 15 Cm dari atas dibuatkan klamp dengan posisi ditengah-tengah antar kaki, klamp ini dilengkapi dengan plat besi tebal 2 mm berbentuk setengah lingkaran diameter luar pipa PVC dengan panjang 15 Cm yang dilas dengan Betoniser ϕ 6 mm sebanyak 3 biji agar tetap kaku jika terkena gelombang, serta melubangi silinder dengan ϕ 5 mm tiap 20 Cm untuk menghilangkan *bouyancy*.

Konfigurasi ini cukup kuat dan kaku sehingga diharapkan tidak copot/patah pada komponennya.



Gambar 3.1a. Model potongan kaki jacket

3.2.1.3 Strain gauges

Alat pengukur dibuat dari plat strip tembaga yang dilekati dengan strain gauges pada kedua sisi lebar plat tembaga dengan menggunakan lem khusus, badan strain gauges berhubungan dengan plat tembaga, sedangkan ujungnya dihubungkan kekabel menuju amplifier Kyowa, tembaga dipilih karena sifat elastis dan anti korosif, strain gauges dipasang dengan rangkaian *full bridge*

menurut aturan jembatan weatstone, jumlah strain gauges yang dipasang adalah 8 buah pada 4 buah plat strip tembaga.

Pembuatan alat pengukur dengan langkah :

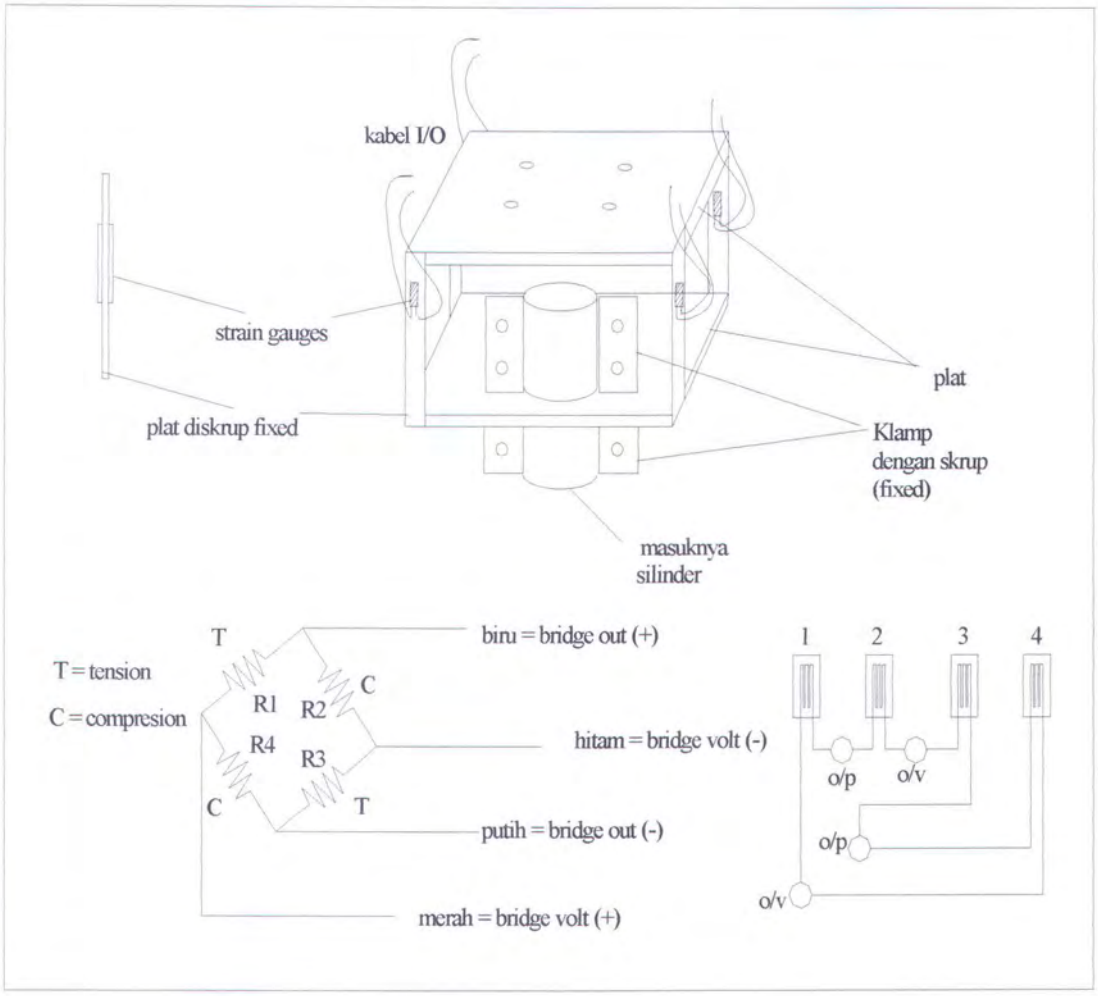
1. Plat besi 2 buah dengan tebal 8 mm dengan ukuran 20x20 cm dilubangi pada salah satu bagian tepat di center poin dengan diameter sebesar diameter luar silinder kaki, sedangkan plat yang satunya dibor untuk menempatkan skrup pada tumpuan/kereta dan ukuran dibuat dengan seakurat mungkin.
2. Kedua plat tersebut dibor dan dibuatkan ulir ϕ 4 mm pada sisi-sisi ujung sedemikian rupa sehingga dapat digunakan untuk menempatkan plat tembaga.
3. Plat tembaga dengan tebal 2 mm dipotong 15 Cm sebanyak 4 buah untuk disekrupkan pada plat besi, dan dibaut dengan kuat agat tidak lepas oleh beban yang bekerja.
4. Kemudian tembaga digosok dengan amplas ukuran 500 dan 1000 searah memanjang dan ditetesi dengan alkohol 90% untuk menghilangkan lapisan oksida dan dilakukan dengan pelan agar serat yang terbentuk menjadi halus dan mengkilat.
5. Strain gauges **HBM** Germany type **6/120LY11** dilem pada permukaan tembaga yang sudah bersih dengan lem khusus bersuhu rendah untuk menjaga hasil yang baik, kemudian setelah kering disambung kabel single pada tiap kaki strain gauges, dan ditutup dengan silikon pada permukaan strain gauges agar tidak putus kakinya, karena sangat kecil ketebalan kaki strain gauges.

Adapun prinsip kerja strain gauges:

1. Strain gauges pada plat tembaga berhubungan dengan pipa uji/potongan kaki jacket, gerakan terjadi akan diteruskan ke strain gauges.

2. Pada waktu pipa uji/potongan kaki jaket terkena gaya horisontal akibat beban gelombang gaya ini terdistribusi pada plat tembaga, dimana strain gauge terpasang.
3. Akibat beban yang diterima , plat uji akan mengalami regangan, hal ini sesuai dengan hukum Hooke, yaitu apabila suatu elemen menerima gaya, maka elemen akan mengalami perubahan elongation yang dinyatakan dengan angka strain, angka ini menunjukkan perubahan panjang dibanding panjang semula.
4. Regangan plat uji/tembaga menyebabkan perubahan *resistivitas* pada strain gauges sehingga akan terjadi berbedaan input dan output voltase yang melewati badan strain gauges.
5. Voltase output dari strain gauge akan diteruskan sinyalnya pada amplifier untuk direkam pada komputer.

Gambar 3.2 Alat pengukur gaya



Gambar 3.3 Susunan Strain Gauges full bridge

3.2.2 Spesifikasi Flume Tank

Percobaan dilakukan di laboratorium Flume Tank Teknik Kelautan ITS, alat utamanya adalah tangki yang terbuat dari plat baja untuk rambatan gelombang (*wave flume*), yang dilengkapi dengan alat untuk membangkitkan gelombang secara mekanis dengan gerakan yang diatur komputer sesuai gerakan *stroke* keatas kebawah pada satu ujung tangki, dilengkapi pula dengan pembangkit arus, pembangkit angin.

Gelombang yang dihasilkan dapat regular maupun iregular. Pada sisi tangki yang lain terdapat alat peredam gelombang dari bahan ijuk sintetis agar pantulan gelombang tidak terjadi, pada dinding samping dipasang kaca dengan tebal 15 mm untuk mengamati proses percobaan dari benda uji.

Tinggi gelombang dan periode di inputkan untuk menjalankan pembangkit gelombang.

Ukuran utama dari tangki adalah

Untuk dimensi keseluruhan:

Tinggi : 2,3 meter

Panjang : 20,3 meter

Lebar : 2,5 meter

Daerah pengujian/pengukuran:

Tinggi : 1,5 meter

Panjang : 14 meter

Lebar : 2meter

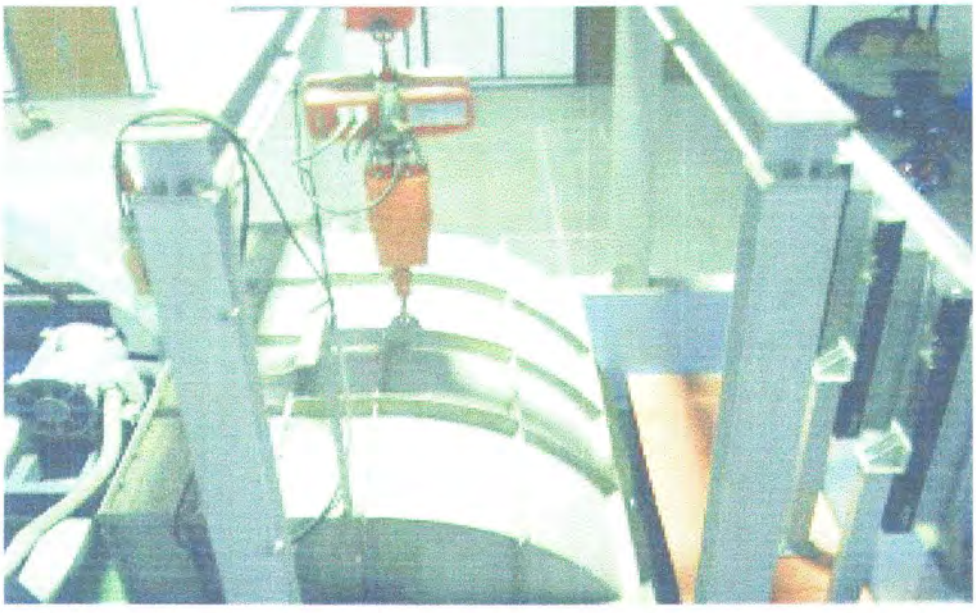
Kedalaman air : 0,7 meter

Gambar 3.4 Tangki Flume

3.2.2.1 Pembangkit gelombang

Pembangkit gelombang pada Flume Tank adalah tipe piston yang merupakan dinding tegak dengan pergerakan berdasarkan simpangan dari piston (*stroke*) dari atas kebawah. Pembangkit gelombang ini dikendalikan oleh pengontrol yang dihubungan secara otomatis ke komputer, terdiri atas:

1. Unit pengontrol pusat menggunakan komputer "Compaq Deskpro" untuk menghasilkan karakteristik gelombang yang diharapkan dengan menginputkan tinggi gelombang dan periode sehingga hasilnya sesuai.
2. Control panel untuk meneruskan sinyal dari komputer menuju alat mekanis yang menggerakkan stroke pembangkit gelombang.



Gambar 3.5 Pembangkit gelombang

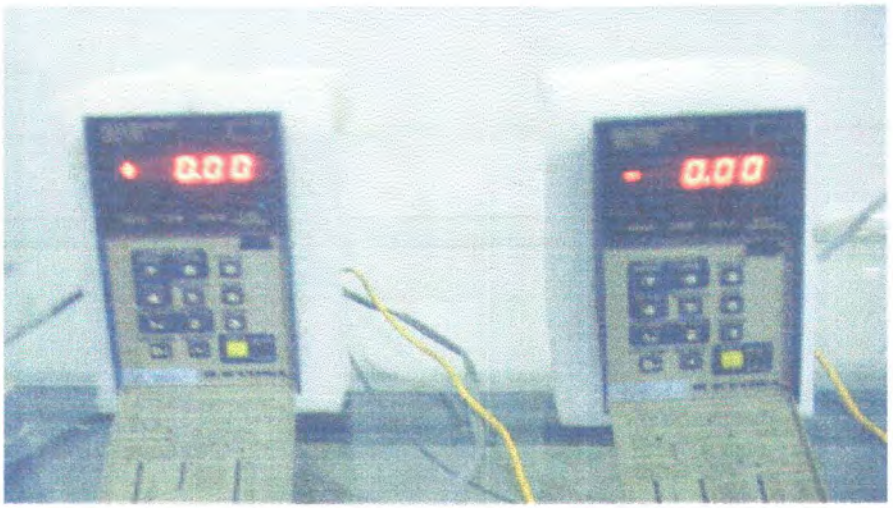
3.2.2.2 ADC interface

Laboratorium Flume Tank dilengkapi dengan interface ADC (*Analog Digital Converter*). Alat ini berfungsi merubah data analog dari *tranducer* (strain gauges) maupun probe menjadi data digital, yang diproses dengan menggunakan piranti lunak. Dengan perangkat ini maka dapat diketahui hasil percobaan secara digital maupun grafik. Untuk ADC hanya dapat digunakan 2 channel pada piranti lunaknya meskipun pada kenyataannya terdapat 16 channel untuk *converter*nya.

3.2.2.3 Amplifier

Amplifier yang digunakan untuk membangkitkan sinyal-sinyal tegangan input yang dibutuhkan oleh rangkaian jembatan *wheatstone* pada *strain gauges* dan berguna untuk menangkap sinyal-sinyal kembali sehingga dapat dibaca komputer melalui ADC, amplifier yang digunakan dalam percobaan ini adalah

merk KYOWA type WGA-710A. amplifier dihubungkan ke ADC untuk mengubah data analog menjadi digital.



Gambar 3.6 Amplifier

3.2.2.4 Compaq personal computer

Perangkat komputer "Compaq Presario" dengan CPU 266, RAM 64 MB, HD 2 GB monitor 15", dengan operasi windows 95, dan dilengkapi piranti lunak untuk menampilkan hasil dari ADC menjadi grafik maupun angka yang dapat dilihat dilayar monitor, tetapi piranti lunak yang bisa digunakan merekam dengan channel ADC hanya dua buah.

Gambar 3.7 ADC dan komputer pencatat

3.3 Penentuan syarat batas

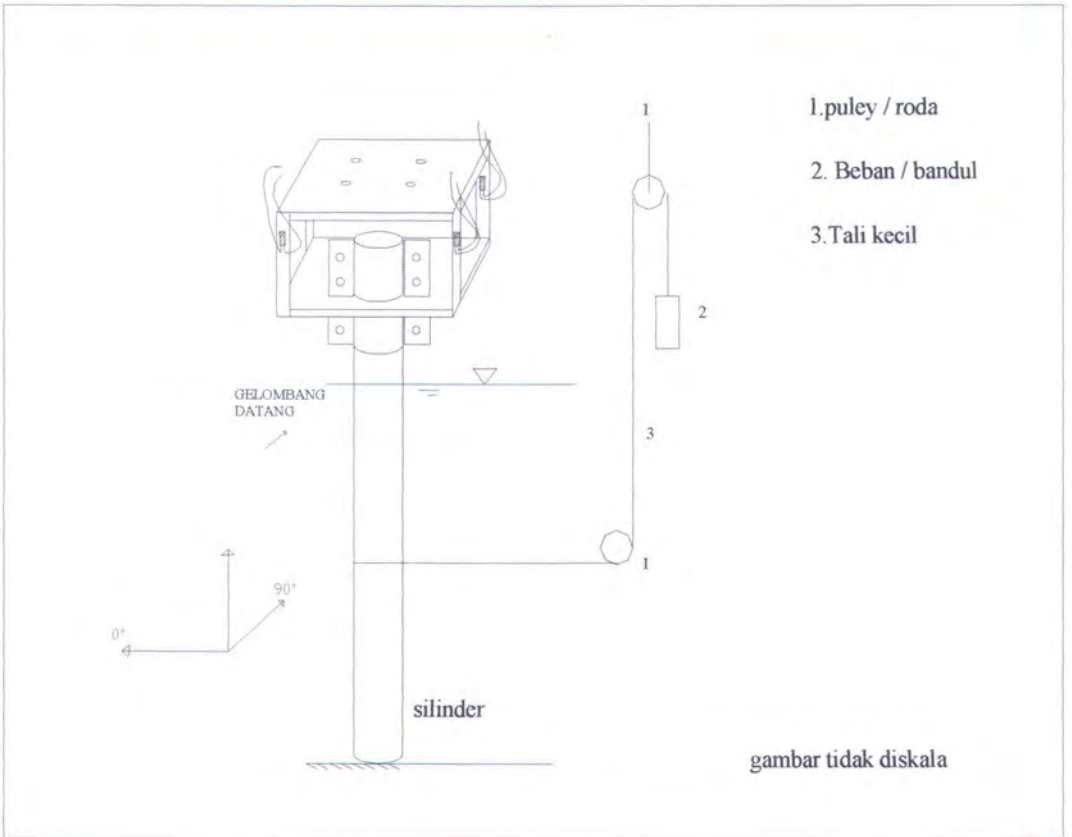
Karena penelitian ini menggunakan beban gelombang, maka karakteristik gelombang harus memenuhi batasan teori gelombang linear dan Morison. Maka dengan demikian parameter gelombang, dapat masuk syarat region validity yang dapat dilihat pada grafik region of validity (Chakrabarti S.K,1987). Yang merupakan fungsi H/gT^2 dan D/gT^2 . Sedangkan persamaan Morison terpenuhi jika $D/\lambda \leq 0.2$, dengan mempertimbangkan syarat dan dari kemampuan laboratorium Flume tank maka percobaan dilakukan. Seperti tabel region validity di lampiran I

3.3.1 Kalibrasi

Setelah peralatan uji terpasang seluruhnya, maka untuk menentukan besarnya gaya yang setara dengan voltase yang terukur dilakukan kalibrasi pada Strain gauges yang *in line* arah sumbu X (*longitudinal*) dan yang tegak lurus dengan arah rambatan gelombang / arah sumbu Y *(transverse*). Langkah kalibrasi untuk strain gauges :

1. Memasangkan tali kecil / benang di tengah bagian memanjang silinder maupun ditengah bagian potongan kaki jaket.
2. Tali diikatkan tegak lurus sumbu vertikal silinder, Kemudian dilewatkan pada roda roll pertama selanjutnya pada roda roll yang
3. Kabel sambungan input dan output disambung ke Amplifier dan posisikan pada kondisi On kemudian dilakukan pengesetan Zero Set.
4. Memasangkan bandul beban sebesar 1 kg, 1.5 kg, 2 kg, 2.5 kg. Dan dicatat perubahan yang tertera diamplifier.

6. Silinder maupun potongan kaki jaket siap untuk di running.



Gambar 3.8 Kalibrasi pada model

3.4 Proses percobaan

Model silinder dipasang pada klamp, kemudian ditopang ke tumpuan diatas tangki sesuai kondisi yang diiginkan dibaut dengan kuat agar tidak bergerak.

Hal yang sama juga dilakukan pada model potongan kaki jacket. Pada potongan kaki jacket dilakukan variasi terhadap posisi model yaitu posisi 0 , 45, 90 drajat dari datangnya gelombang (*Head sea*).

Hal yang dilakukan saat percobaan yaitu:

1. Silinder terpasang yang sudah dikalibrasi di beri beban gelombang dengan H dan T yang berbeda.

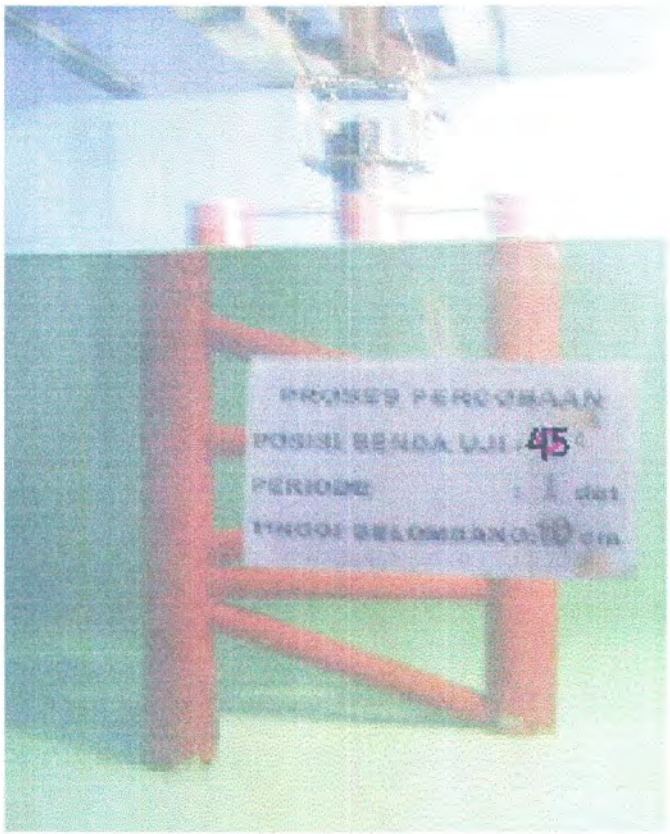
2. Selama proses pengujian, masing-masing tahap dilakukan perekaman data dengan jumlah dan rentang waktu yang sama yang akan dibaca strain gauges.
3. Jumlah data yang direkam adalah 1000 dengan rentang waktu 10 detik.
4. Setelah silinder selesai diganti dengan model potongan kaki jacket yang telah dikalibrasi dengan menginputkan H dan T seperti pada silinder, dengan variasi sudut 0, 45, 90 derajat dari model.

Tabel 3.1 Input proses percobaan

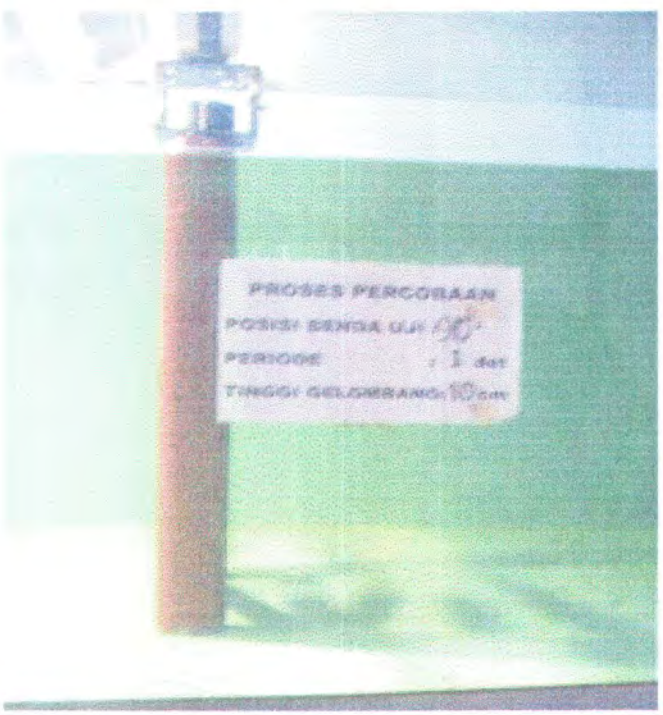
silinder		potongan Kaki jacket	
H (cm)	T (det)	H (cm)	T (det)
10	1	10	1
	2		2
	3		3
	4		4
8	1	8	1
	2		2
	3		3
	4		4
6	1	6	1
	2		2
	3		3
	4		4
4	1	4	1
	2		2
	3		3
	4		4
2	1	2	1
	2		2
	3		3
	4		4

Gambar 3.9 Proses Percobaan untuk silinder

Gambar 3.10 Proses Percobaan Pot. Kaki jacket 0^0



Gambar 3.11 Proses Percobaan Pot. Kaki jacket 45^0



Gambar 3.12 Proses Percobaan Pot. Kaki jacket 90^0

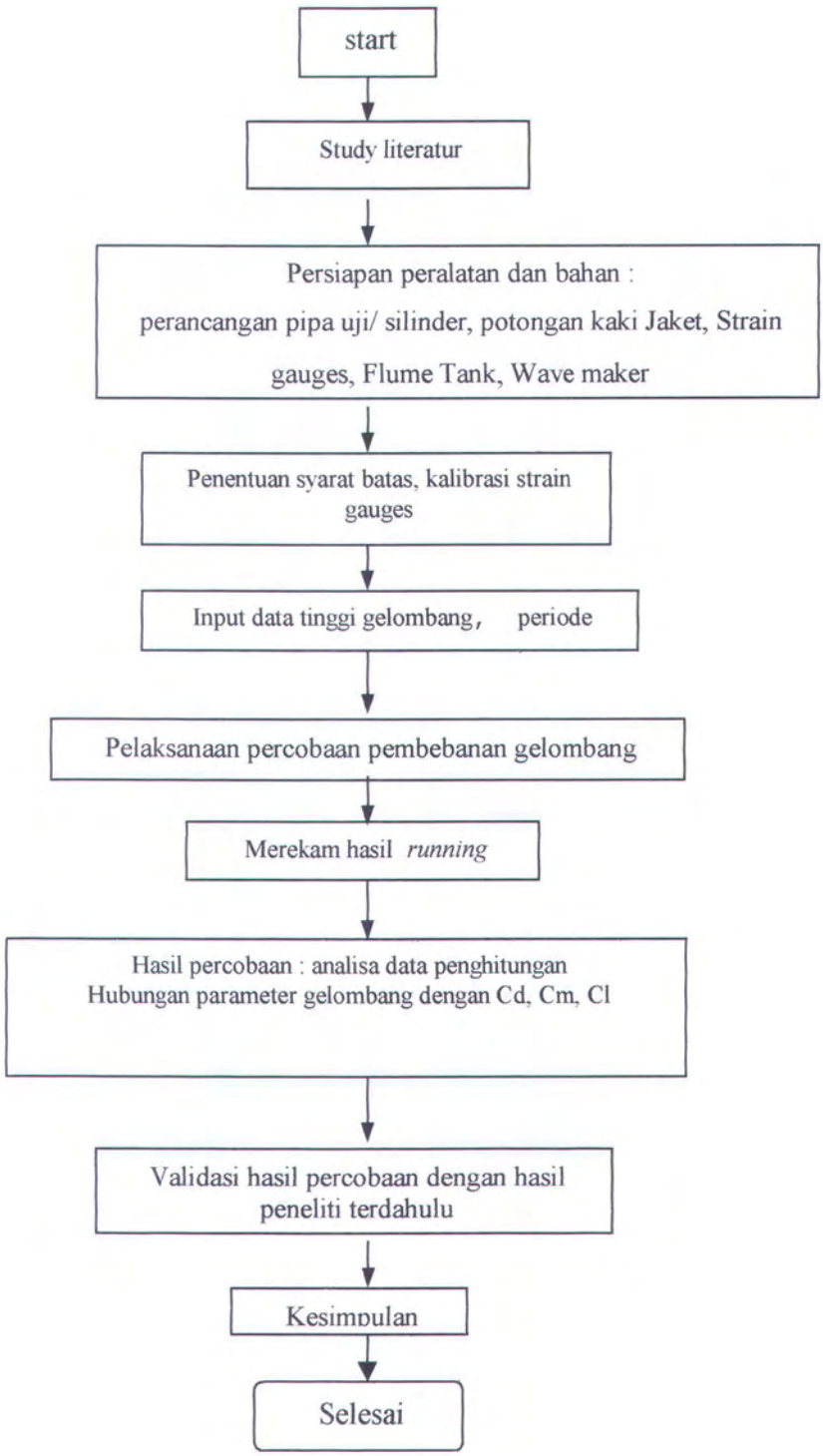
3.5 Analisa data

Setelah percobaan selesai dilakukan, maka langkah selanjutnya adalah melakukan analisa data yang telah didapat dari proses percobaan. Data-data tersebut merupakan hasil pembacaan strain gauges, data-data yang ada untuk setiap langkahnya dikalikan dengan faktor kalibrasi sehingga didapatkan besar gaya yang dialami oleh silinder dan potongan kaki jacket.

Untuk mengetahui besarnya koefisien inersia, drag, dan lift sebelumnya dilakukan perhitungan kecepatan dan percepatan gelombang. Hasil dari perhitungan kemudian dimasukkan ke persamaan Morison untuk menghitung besarnya koefisien inersia, drag, dan *lift* dari harga Cm , Cd, dan Cl tersebut diplotkan kedalam grafik dengan hubungannya angka Keulegan Carpenter. Hasil analisa tersebut kemudian dibandingkan dengan percobaan yang sudah pernah dipublikasikan. Dan selanjutnya dibuat kesimpulan dari hasil analisa data percobaan yang telah dilakukan.

3.6 Pembuatan laporan akhir

Setelah semua proses diatas dilakukan dan analisa telah selesai maka dilakukan pembuatan laporan akhir tentang semua yang telah dilakukan dalam proses dari awal hingga akhir percobaan.



Gambar 3.13 Diagram alir percobaan

"Bila anda yakin bahwa sesuatu itu tak mungkin, maka pikiran anda akan memberi bukti mengapa hal itu tidak mungkin. Akan tetapi, bila anda percaya dan yakin bahwa sesuatu itu mungkin, maka pikiran anda jualah yang akan menuntun anda untuk mendapatkannya "

Davey Yohn Schwartz

BAB IV
HASIL DAN PEMBAHASAN

BAB IV

HASIL DAN PEMBAHASAN

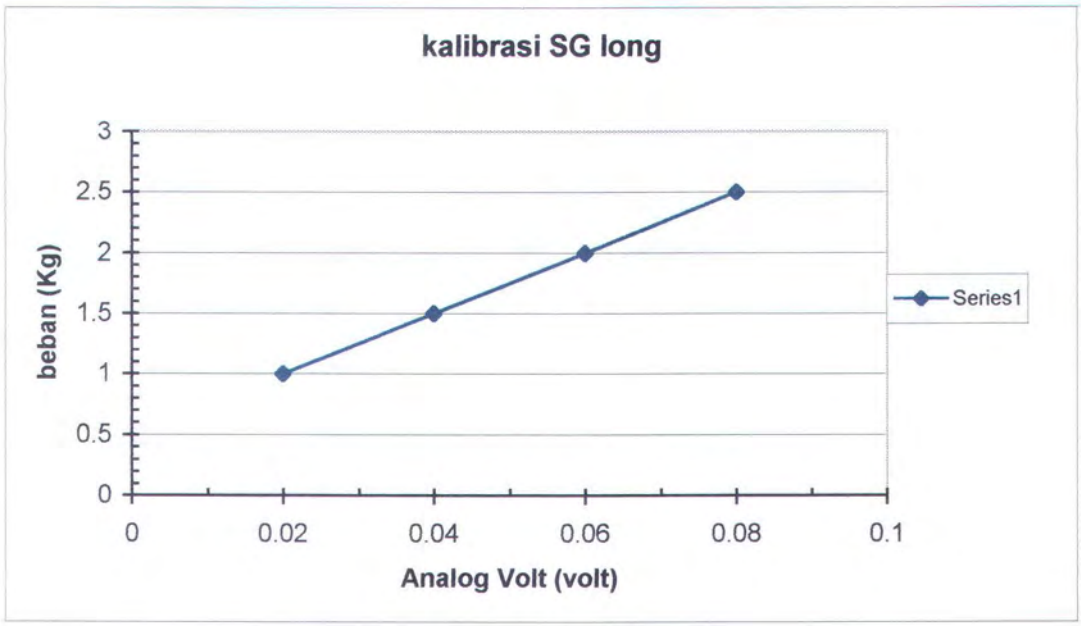
4.1 Hasil

4.1.1 Hasil kalibrasi strain gauge

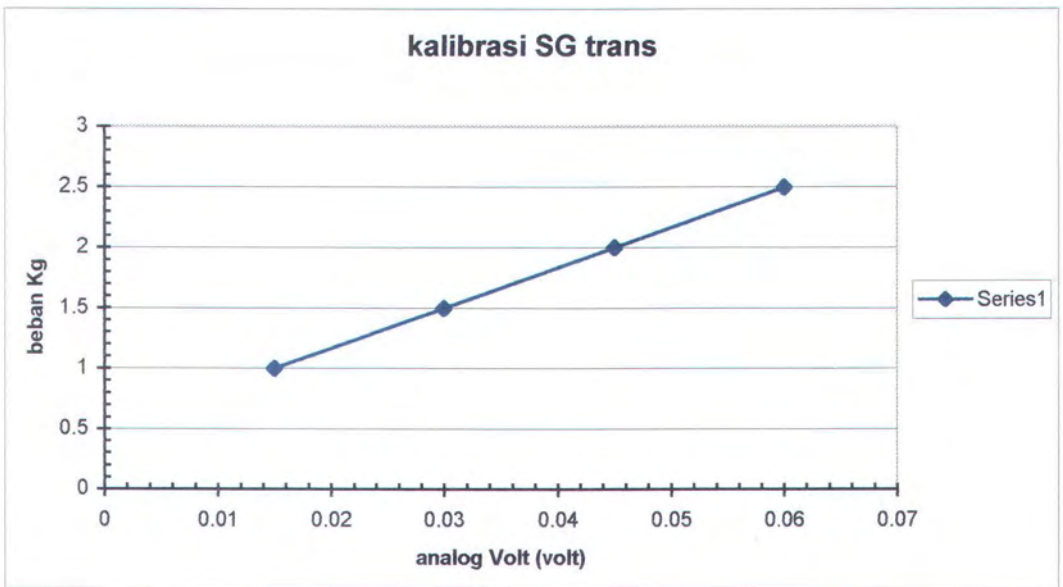
Kalibrasi yang dilakukan pada percobaan ini adalah untuk mengetahui besarnya gaya yang setara dengan voltase yang terukur pada alat perekam percobaan *Analog Digital Converter* (ADC).

Strain gauge yang digunakan untuk percobaan ini disusun dengan rangkaian full bridge masing-masing pada bagian transversal maupun longitudinal. Proses kalibrasi dilakukan dengan beban 1Kg, 1.5 Kg, 2 Kg, 2.5 Kg. Beban tersebut digantungkan pada tali yang sudah diikatkan pada model secara tegak lurus, kemudian hasil yang terukur pada Amplifier dicatat berupa Voltase. Hasil kalibrasi dan perhitungan dapat dilihat di lampiran I.

Dari hasil kalibrasi tersebut dicari nilai konstanta kalibrasi rata-rata (Cc) untuk strain gauge longitudinal sebesar 372,98 N/v, untuk strain gauge transversal sebesar 497,31N/v. Untuk mengetahui besarnya gaya yang terjadi dapat dicari dengan cara mengalikan hasil pembacaan Strain gauge dengan Cc (N/v) misalnya pembacaan strain gauge longitudinal 0,03 Volt maka gaya yang terjadi adalah 0,03 x 372,98 = 11,18 Newton. Grafik kalibrasi dapat dilihat pada gambar 4.1 dan 4.2



Gambar 4.1 Grafik kalibrasi SG long.



Gambar 4.2 Grafik kalibrasi SG trans.

4.1.2 Hasil Percobaan

Hasil percobaan diperoleh dari rekaman pembacaan strain gauge longitudinal dan transversal. Setiap proses menghasilkan 1000 data dalam rentang waktu pencatatan 10 detik. Waktu pencatatan kemudian dibagi 1000 menghasilkan 0.01 detik tiap interval data. Data-data kemudian dimasukkan dalam tabel seperti pada lampiran II.

4.1.3 Hasil perhitungan koefisien Drag, inersia dan lift

Untuk menghitung besarnya koefisien Inersia dan Koefisien Drag menggunakan persamaan Morison. Persamaan ini dapat digunakan dengan memasukkan gaya pada komponen longitudinal yang terjadi serta besarnya kecepatan dan percepatan gelombang, yang kemudian dapat ditemukan nilai Cd dan Cm. Sedangkan untuk menghitung koefisien lift (Cl) dapat dicari dengan memasukkan besarnya gaya transversal yang terjadi serta kecepatan gelombang dengan menggunakan persamaan *Transverse Force*. Hasil perhitungan dapat dilihat dalam **Tabel 4.1**

Tabel 4.1 Hasil percobaan dari silinder

KC=uT/D	Cd	Cm	Cl
0.645811	1.2627	2.1949	0.7727
0.804445	1.2804	2.1886	0.8352
1.104738	1.2877	2.1640	0.9465
1.429911	1.3399	2.1241	1.0530
1.344554	1.2898	2.1369	1.0131
1.625322	1.3597	2.1120	1.1544
2.219522	1.4185	2.0566	1.3943
2.867145	1.4703	2.0349	1.5012
2.099501	1.4405	2.0907	1.3306
2.46304	1.4073	2.0704	1.4151
3.344561	1.5039	1.9897	1.5741
4.311847	1.5282	1.9966	1.7301
2.914103	1.4600	2.0119	1.5560
3.318013	1.4608	1.9857	1.5002
4.480069	1.5536	1.9462	1.6539
5.764162	1.5999	1.8997	1.8086
3.792	1.5055	1.9742	1.5548
4.190663	1.5321	1.9781	1.6482
5.626258	1.5808	1.9209	1.8397
7.224236	1.6902	1.6150	2.1349

Tabel 4.2 Hasil percobaan pot. Kaki jacket 0 drajat

KC=uT/D	Cd	Cm	Cl
0.645811	1.5504	2.2605	0.9463
0.804445	1.5719	2.2413	1.0126
1.104738	1.5520	2.2251	1.1499
1.429911	1.5904	2.1736	1.2707
1.344554	1.5714	2.1881	1.1619
1.625322	1.6632	2.1511	1.3009
2.219522	1.7042	2.0952	1.5892
2.867145	1.7127	2.0797	1.7681
2.099501	1.6510	2.1312	1.5214
2.46304	1.6616	2.1205	1.6245
3.344561	1.7408	2.0482	1.7884
4.311847	1.7814	2.0590	1.8897
2.914103	1.7017	2.0638	1.7516
3.318013	1.7264	2.0571	1.6818
4.480069	1.8135	2.0086	1.8363
5.764162	1.8347	1.9915	1.9768
3.792	1.7672	2.0376	1.7416
4.190663	1.7843	2.0270	1.8118
5.626258	1.8353	2.0050	1.9937
7.224236	1.8986	1.7751	2.2318

Tabel 4.3 Hasil percobaan pot. Kaki jacket 45 drajat

KC=uT/D	Cd	Cm	Cl
0.645811	1.764235	2.336407	1.278437
0.804445	1.786702	2.318004	1.341678
1.104738	1.775515	2.30879	1.410807
1.429911	1.775515	2.30879	1.410807
1.344554	1.769877	2.276987	1.527139
1.625322	1.83331	2.24876	1.567779
2.219522	1.870452	2.215352	1.754912
2.867145	1.934484	2.191986	1.942888
2.099501	1.838845	2.238706	1.767798
2.46304	1.835397	2.220991	1.827132
3.344561	1.972822	2.156332	2.037942
4.311847	2.04103	2.173942	2.185064
2.914103	1.923375	2.159668	1.986021
3.318013	1.941597	2.162041	1.972884
4.480069	2.048045	2.12304	2.155851
5.764162	2.106097	2.118446	2.246555
3.792	1.985956	2.154113	2.009688
4.190663	2.01517	2.152267	2.079093
5.626258	2.076307	2.142251	2.277017
7.224236	2.171347	1.897351	2.420309

Tabel 4.4 Hasil percobaan pot. Kaki jacket 90 drajat

KC=uT/D	Cd	Cm	Cl
0.645811	1.8579	2.4156	1.5423
0.804445	1.8820	2.4032	1.6123
1.104738	1.9049	2.3957	1.6593
1.429911	1.9050	2.3859	1.8249
1.344554	1.9281	2.3901	1.8152
1.625322	2.0528	2.3590	1.8922
2.219522	2.0328	2.3158	2.0688
2.867145	2.1320	2.3029	2.1622
2.099501	2.0163	2.3454	2.0795
2.46304	2.0722	2.3343	2.0810
3.344561	2.1703	2.2409	2.2913
4.311847	2.1736	2.2457	2.3367
2.914103	2.1311	2.2859	2.2406
3.318013	2.1348	2.2629	2.2217
4.480069	2.2000	2.2131	2.2634
5.764162	2.2804	2.2149	2.3758
3.792	2.1497	2.2260	2.2160
4.190663	2.1400	2.2253	2.2930
5.626258	2.2605	2.2852	2.4441
7.224236	2.3404	2.0421	2.6760

4.1.3.1 Hasil Perhitungan Angka Keulegan Carpenter

Seperti telah diuraikan dalam Bab II harga koefisien inersia, drag dan *lift* biasanya digambarkan dengan terhadap angka Keulegan Carpenter pada aliran gelombang. Pada angka Keulegan Carpenter digunakan karena mengandung parameter gelombang yaitu periode gelombang. Dalam tabel dibawah ini dapat dilihat hasil perhitungan angka Keulegan Carpenter.

Tabel 4.5 Hasil perhitungan KC

T	H cm	KC=uT/D
1	2	0.645811
2	2	0.804445
3	2	1.104738
4	2	1.429911
1	4	1.344554
2	4	1.625322
3	4	2.219522
4	4	2.867145
1	6	2.099501
2	6	2.46304
3	6	3.344561
4	6	4.311847
1	8	2.914103
2	8	3.318013
3	8	4.480069
4	8	5.764162
1	10	3.792
2	10	4.190663
3	10	5.626258
4	10	7.224236

4.2 Pembahasan

4.2.1 Hubungan koefisien Drag terhadap angka Keulegan Carpenter

Dari hasil perhitungan dapat dilihat hubungan Koefisien Inersia, Drag dan Lift dengan angka Keulegan Carpenter dapat dilihat dalam gambar halaman barikutnya.

Pada silinder, koefisien Drag dengan angka KC menunjukkan fenomena kenaikan dari angka KC 0.645 yang mula-mula menunjukkan Cd sebesar 1.262 naik secara perlahan 1.280 pada KC 0.804 dan terus bergerak naik sampai angka KC 2.099 Cd berada pada posisi 1.440, kemudian turun menjadi 1.41 pada angka KC 2.219. Setelah itu terjadi kenaikan drastis Cd menjadi 1.470 yamg turun lagi menjadi 1.4599. kemudian naik terus sampai mencapai 1.69 pada KC7.224.

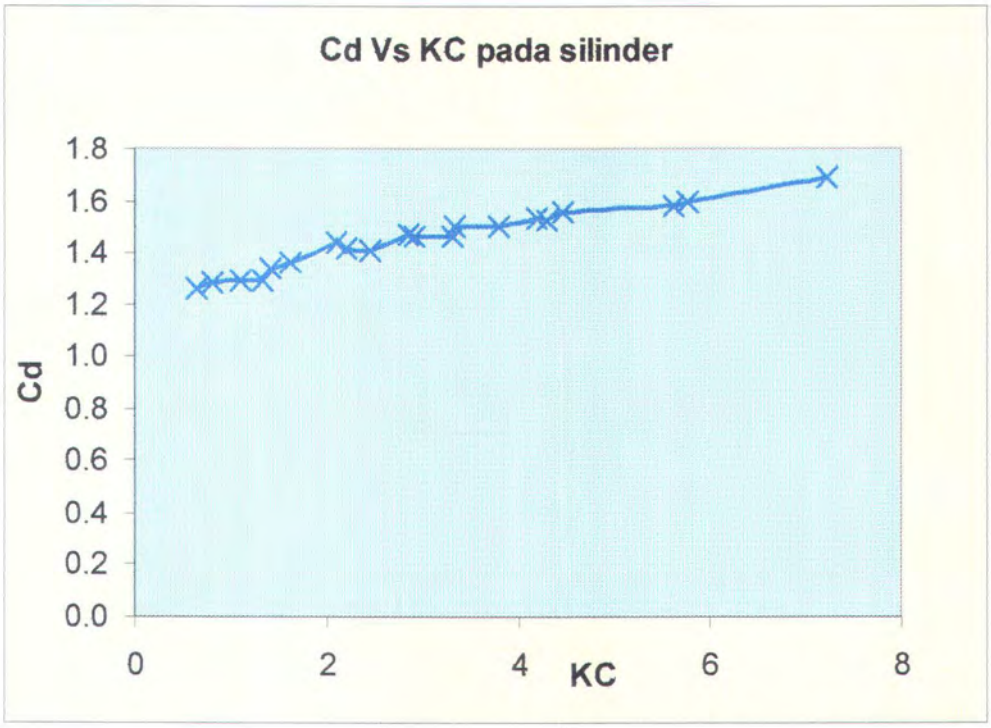
Sedangkan pada potongan kaki jacket dengan posisi 0 drajat menunjukkan kenaikan yang serupa mula-mula bernilai 1.550 pada angka KC 0.645 dan naik menjadi 1.571 pada KC 0.804, kemudian turun menjadi 1.552 pada KC 1.104, dan naik lagi sampai 1.663 pada KC 1.625 kemudian turun pada nilai KC 2.099 dengan Cd 1.651 selanjutnya naik menjadi 1.704 pada KC 2.219, kemudian turun pada KC 2.463 dengan nilai Cd 1.661 dan naik sampai angka KC 7.224 dengan nilai Cd 1.898.

Pada potongan kaki jacket posisi 45 *trend* yang terjadi juga hampir sama yaitu terjadi kenaikan dari angka Cd 1.764 pada KC 0.645, dan turun menjadi 1.775 pada 1.104, kemudian turun jadi 1.769 pada KC 1.344 setelah itu naik lagi sampai menjadi 1.870 pada KC 2.219 lalu turun jadi 1.835 pada KC 2.463 kemudian naik 1.934 dengan KC 2.867 setelah itu naik sampai Cd 2.171 pada KC 7.224.

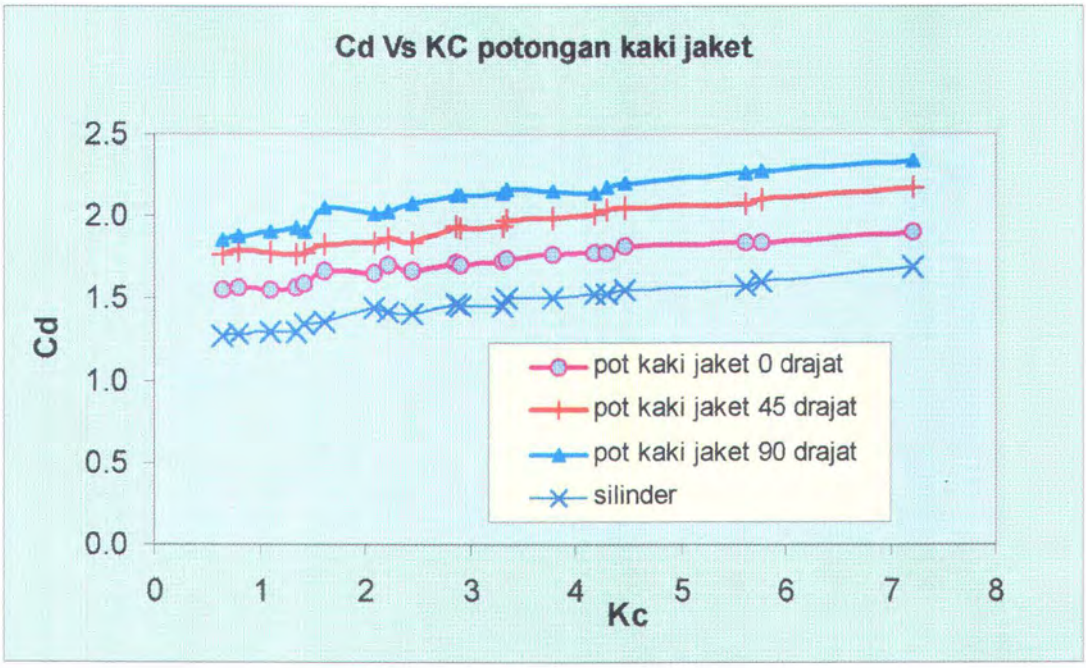
Pada potongan kaki jacket posisi 90 drajat trend juga sama yaitu naik turun, dari yang semula 1.857 pada KC 0.645 naik menuju angka 1.928 dengan KC 1.344

kemudian turun pada KC 1.429 dengan nilai Cd 1.905 dan terus turun, setelah itu terjadi kenaikan lagi pada Cd 2.032 dengan KC 2.219 dan terus naik, kemudian turun pada Cd 2.131 dengan KC 2.914 setelah itu terjadi kenaikan lagi sampai mencapai angka 2.170 kemudian turun pada KC 3.792 dengan Cd 2.149, selanjutnya naik lagi pada Cd 2.173 dengan KC 4.311 sampai mencapai 2.340 pada KC 7.224.

Secara keseluruhan terlihat bahwa grafik terjadi kenaikan pada nilai koefisien Drag seiring dengan kenaikan KC yang semakin naik.



Gambar 4.3 Koefisien drag terhadap Kc pada silinder



Gambar 4.4 Koefisien drag terhadap Kc pada potongan kaki jacket

4.2.2 Hubungan koefisien Inersia terhadap angka Keulegan Carpenter

Pada hubungan antara koefisien Inersia dan angka Keulegan Carpenter terlihat pada **Gambar 4.5-4.6**

Silinder koefisien inersia yang dimulai dari 2.194 dengan KC 0.645 menunjukkan panurunan drastis yang mencapai angka 1.985 pada KC 3.318, kemudian naik sedikit menjadi 1.989 pada KC 3.344 setelah itu terjadi penurunan lagi pada KC 2.792 sebesar 1.974, setelah itu terjadi kenaikan sedikit 1.978 pada KC 4.190 sampai KC 4.311 dengan Cm 1.996 , dan mulai penurunan tajam pada KC 4.480 dengan Cm1.946 sampai pada Cm 1.615, KC 7.224.

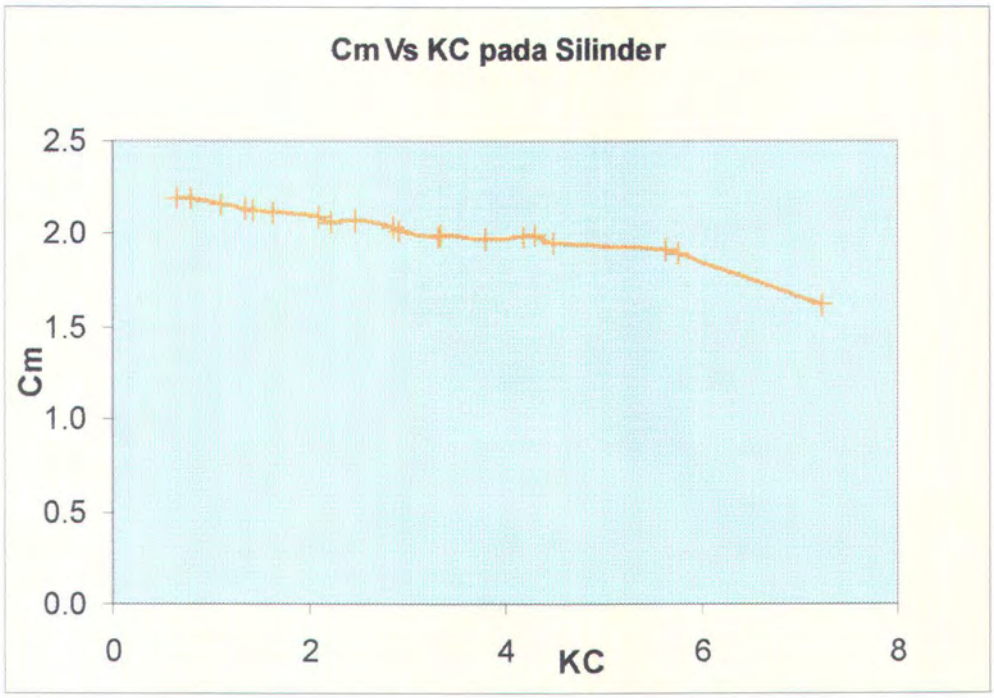
Potongan kaki jacket posisi 0 drajat menunjukkan grafik yang berpola sama dimulai dari Cm 2.260 pada KC 0.645 kemudian turun sampai menjadi 2.095 dengan KC

2.219, setelah itu naik menjadi 2.120 pada KC 2.643, dan turun kembali jadi 2.079 dan semakin turun sampai pada KC 7.422 dengan Cm 1.775.

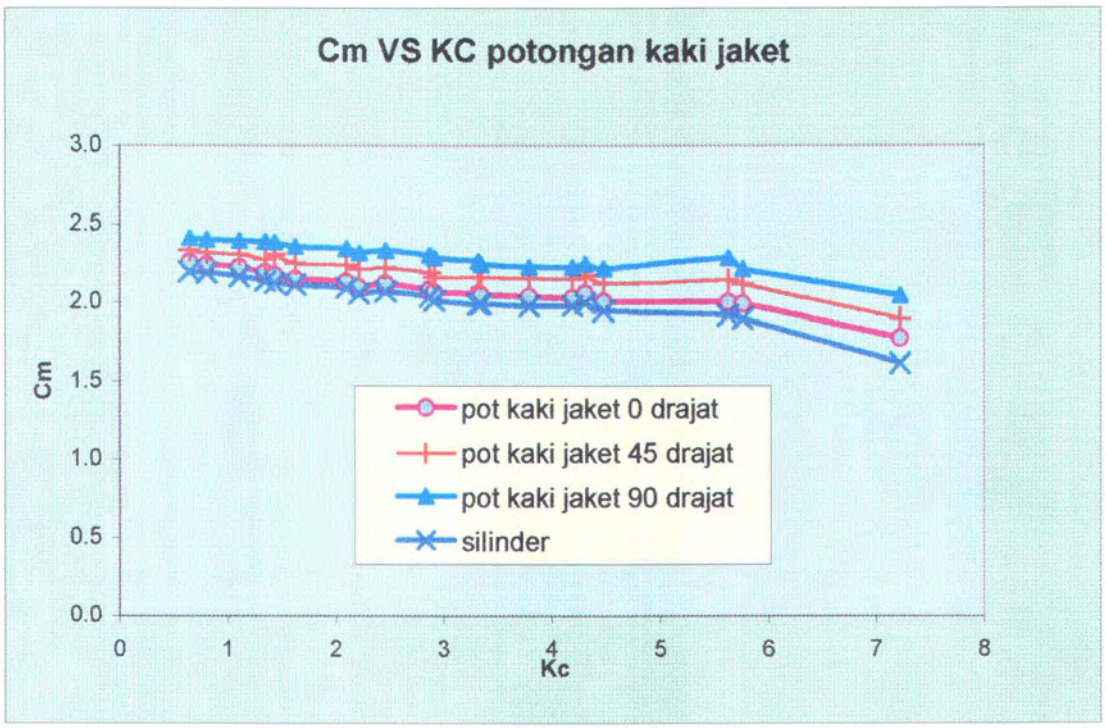
Pada potongan kaki jacket posisi 45 drajat dimulai dari Cm 2.336 dengan KC 0.645 kemudian turun sampai Cm2.277 dengan KC 1.334, setelah itu naik menjadi 2.308 pada KC 1.429 kemudian turun lagi menjadi 2.248 pada KC 1.625 sampai angka 2.215 dengan KC 2.219, setelah itu naik menjadi Cm 2.221 pada KC 2.463, kemudian turun lagi menjadi 2.192 pada KC 2.867 dan terus menurun sampai angka 2.123 KC 4.480 lalu terjadi kenaikan menjadi 2.142 kemudian turun tajam sampai mencapai angka 1.897 pada KC 7.224.

Potongan kaki jacket posisi 90 drajat menunjukkan Cm dimulai dari 2.415 pada KC 0.645 kemudian semakin turun sampai pada angka 2.315 dengan KC 2.032, kemudian naik menjadi 2.334 pada KC 2.463 setelah itu turun sampai mencapai angka 2.225 pada KC 4.190, kemudian naik menjadi 2.245 dan turun lagi menjadi 2.213 pada KC 4.48, kemudian naik lagi menjadi 2.285 pada KC 5.626, setelah itu turun tajam menjadi 2.214 pada KC 5.764 sampai angka 2.042 pada KC 7.224.

Pada grafik koefisien Inersia terhadap KC seluruhnya menunjukkan kecenderungan penurunan Cm seiring kenaikan KC



Gambar 4.5 Koefisien inersia terhadap Kc pada silinder



Gambar 4.6 Koefisien inersia terhadap Kc pada potongan kaki jacket

4.2.3 Hubungan koefisien Lift terhadap angka Keulegan Carpenter

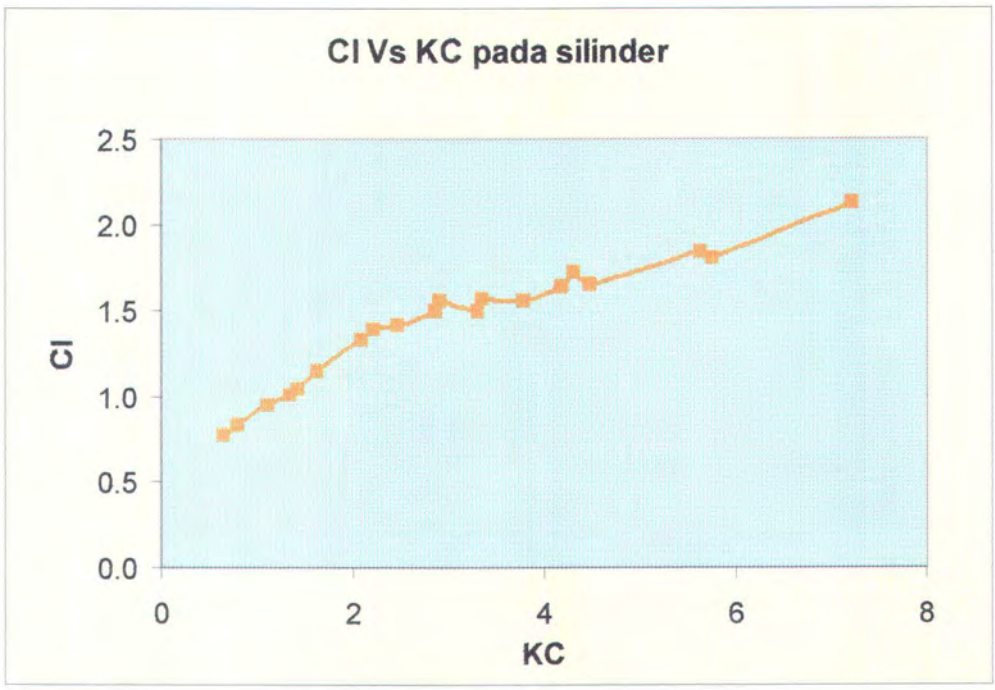
Pada silinder menunjukkan kenaikan dimulai dari Cl 0.773 dengan KC 0.645, kemudian terus naik sampai mencapai 1.555 pada KC 2.914, setelah itu turun menjadi 1.500 pada KC 3.318, lalu naik lagi menjadi 1.573 dengan KC 3.344, dan turun lagi menjadi 1.555 pada KC 3.792, naik sampai posisi 2.134 pada KC 7.224.

Potongan kaki jacket posisi 0 drajat Cl 0.946 pada KC 0.645, kemudian naik terus sampai mencapai Cl 1.769 pada KC 2.867. setelah itu terjadi penurunan sampai Cl 1.682 pada KC 3.318 kemudian naik lagi menjadi 1.787 pada KC 3.344, dan turun lagi pada Cl 1.741 dan naik lagi sampai Cl 1.890 dengan KC 4.311, kemudian turun 1.837 dan naik lagi sampai 2.231 pada KC 7.224.

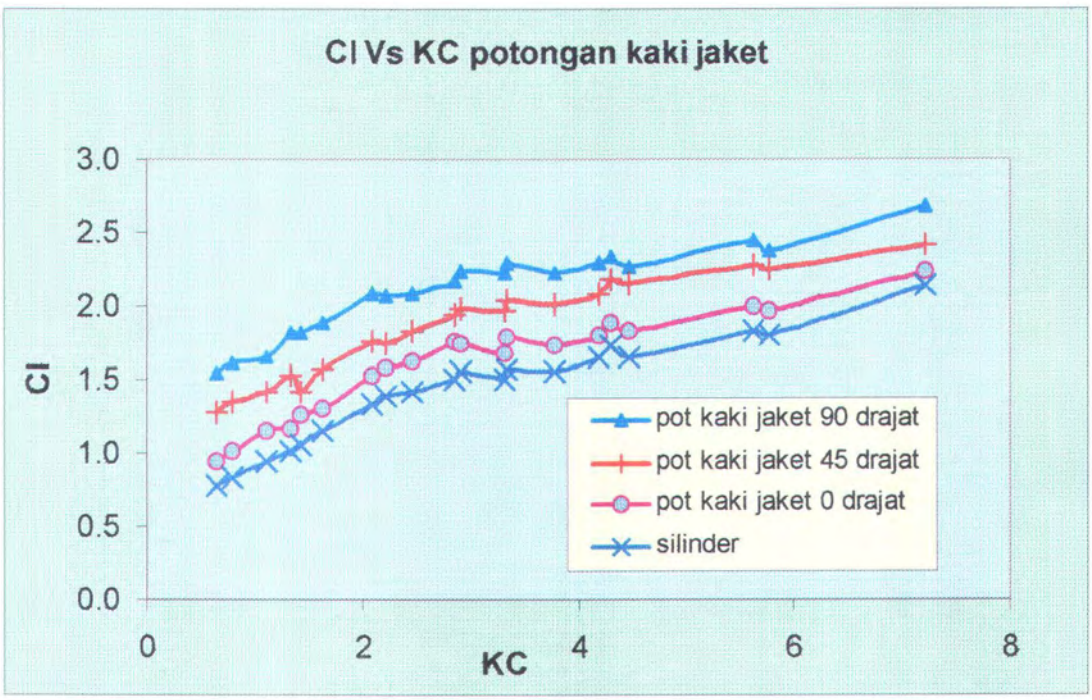
Potongan kaki jacket posisi 45 menunjukkan Cl dimulai dari 1.277 pada KC 0.645 kemudian naik sampai 1.527 dengan KC 1.344 kemudian turun pada Cl 1.409 dengan KC 1.429, kemudian berlanjut naik sampai Cl 1.985 kemudian turun menjadi 1.972 pada KC 3.318, setelah itu naik lagi menjadi Cl 2.038 lalu turun lagi 2.010pada KC 3.792 setelah itu naik terus sampai 2.420 pada KC 7.224.

Potongan kaki jacket posisi 90 drajat menunjukkan dimulai dari Cl 1.542 kemudian perlahan naik sampai Cl 2.080 pada KC 2.099 kemudian turun pada Cl 2.068 dengan KC 2.219 setelah itu naik mencapai angka 2.241 pada KC 2.914, dan turun pada Cl 2.222 dengan KC 3.318, setelah itu naik lagi dengan terus naik sampai mencapai 2.676 pada KC 7.224.

Pada grafik koefisien Lift seluruhnya menunjukkan kecenderungan naik seiring kenaikan nilai KC



Gambar 4.7 Koefisien lift terhadap Kc pada silinder



Gambar 4.8 Koefisien lift terhadap Kc pada potongan kaki jacket

4.2.4. *Discussion* untuk seluruh hasil percobaan

Untuk koefisien drag pada percobaan hasilnya semakin naik karena dengan semakin bertambahnya kenaikan kecepatan dari gelombang akan terbentuk boundary layer yang berpengaruh pada *resistant motion* atau drag sehingga membentuk diskontinuitas pada permukaan silinder yang menyebabkan aliran tidak stabil sehingga pecah menyebabkan *eddies/vortice.*

Untuk koefisien inersia penurunan terjadi karena dipengaruhi karakteristik aliran yang melewati silinder apakah dominan drag atau inersia untuk kasus percobaan diatas hasilnya diperoleh merupakan *dominated drag region* yang menyebabkan drag besar dan inersia kecil sehingga hasil koefisien inersia yang diperoleh juga semakin mengecil. Selain itu menurut hasil dari percobaan diatas jika terjadi kenaikan Cd maka Cm akan turun.

Untuk koefisien lift pada gaya transversal digunakan hanya untuk menghitung Cl, dari kenaikan kecepatan yang terjadi timbul diskontinuitas sehingga aliran tidak stabil dan terjadi pemisahan/pecah yang menimbulkan eddies maka mirip dengan drag sehingga gaya lift yang terjadi juga besar.

Hasil percobaan pada posisi 0 derajat yang merupakan mirip dengan posisi susunan tandem pada dua silinder, dan posisi 45 derajat yang merupakan gambaran susunan *staggered* pada 2 silinder hasilnya lebih kecil dari posisi 90 derajat yang identik dengan susuna *side by side* dikarenakan pada hasil ketiga koefisien tersebut baik Cd, Cm, Cl, pada posisi 0, dan 45 untuk *spacing* lebih dari 4D, karena potongan kaki jacket berjarak 5 D maka menurut Dasar teori Bab II didepan dari susunan ini akan terbentuk ***wake interference***, pada aliran gelombang kecepatan yang terjadi semakin

naik dan terjadi *wake* sehingga menimbulkan aliran yang disebut *karman vortex street*, *wake* tersebut terjadi pada silinder bagian depan (*upstream*) dan berimbas pada silinder (*downstream*) yang menyebabkan gaya pada posisi 0 derajat dan 45 derajat lebih kecil dibanding dengan gaya yang terjadi pada posisi 90 derajat (*side by side*).

4.3. Validasi hasil pengujian dengan pengujian yang telah dipublikasikan

Seperti telah ditulis didepan penelitian mengenai potongan kaki jacket akibat gelombang sangatlah minim sehingga dalam Validasi ini digunakan penelitian yang menggunakan silinder yang dipasangi anode dengan posisi variasi sudut yang dilakukan dalam laboratorium *U-Tube* untuk potongan kaki jacketnya, hal ini dilakukan karena untuk menentukan validasi secara numerik dengan perhitungan sangatlah sulit karena untuk menghitung ketiga koefisien hidrodinamis harus mengetahui gaya gelombang terlebih dahulu, sedangkan untuk mengetahui gaya gelombang memerlukan koefisien hidrodinamis tersebut, hal ini begitu dilematis dan waktu yang dimiliki sangatlah terbatas untuk pengerjannya, meskipun dengan menggunakan sofware akan memerlukan iterasi yang banyak untuk dapat mengetahui gaya gelombang pada potongan kaki jacket terlebih dahulu, baru dicari nilai koefisiennya.

Sedangkan untuk silinder juga dilakukan validasi terhadap percobaan silinder bersih dari percobaan *U-Tube* selain itu hasil penelitian ini berkisar dengan angka Keulegan Carpenter yang rendah yaitu antara 0.645 -7.224 sedangkan pembanding menggunakan rentang KC yang berkisar antara 3 – 30.

Pada silinder hasil yang didapat yaitu menurut Sarpkaya (1977), Bearman (1979) dan Indiyono (1996) dalam penelitiannya menunjukkan semakin naik angka Keulegan Carpenter dalam rentang 3-7.5 maka angka koefisien Drag juga semakin naik sedangkan koefisien drag silinder yang di teliti di lab. Flume tank menunjukkan kenaikan koefisien drag dalam rentang KC 2.867- 7.224. Besarnya perbedaan dengan Sarpkaya berkisar ± 24.26% - 51%, dengan Bearman ±21.76% - 12.42%, dengan Indiyono berbeda ± 5.44% - 0.59%

Untuk potongan kaki jaket posisi 0, 45 dan 90 derajat penghitungannya dilakukan dengan cara gaya bekerja pada model potongan kaki jaket dengan posisi 0, 45, 90 dikurangi dengan model silinder yang diuji sehingga didapatkan gaya pada bracingnya kemudian dihitung besarnya masing-masing koefisien drag, inersia dan koefisien lift dan dirata-rata hasil hitungan silinder dan hitungan bracing sehingga didapatkan hasil koefisien drag, inersia dan liftnya.

Dibanding dengan penelitian Indiyono (1996) pada silinder dengan anode menunjukkan kecenderungan Cd naik dengan KC 5-7.5 koefisien drag pada penelitian Indiyono menunjukkan kenaikan sedangkan pada potongan kaki jaket juga menunjukkan kenaikan pada posisi masing-masing dengan KC 4.480-7.224. Untuk lebih jelasnya dapat dilihat pada **Gambar 4.9-4.10.** Perbedaan dengan koefisien drag dengan Indiyono pada posisi 0 derajat potongan kaki jacket sebesar ± 3.86% - 3.76%, posisi sebesar 45 derajat ±2.53% - 0.4%, posisi 90 derajat sebesar ± 0.45% - 8.54%

Untuk koefisien Inersia dalam penelitian Sarpkaya (1977), Bearman (1979) dan Indiyono (1996) pada silinder menunjukkan penurunan Inersia pada KC 3-7.5

dan pada silinder percobaan di Flume Tank juga menunjukkan penurunan pada KC 2.867-7.224. perbedaan dengan Sarpkaya sebesar ± 2.75% - 28.79%, dengan Bearman ± 2.16% - 4.02%, dengan Indiyono ±2.16% - 8.35%

Sedangkan untuk potongan kaki jacket dibanding dengan penelitian Indiyono (1996) pada silinder dengan anode menunjukkan pada posisi 0,45,90 penurunan pada Cm dari KC 3-7.5 dan potongan kaki jacket juga terjadi penurunan Cm dengan KC 4.480-7.224. perbedaan sebesar ±4.55% - 16.62% pada posisi 0 derajat, pada posisi 45 derajat sebesar ±5.51% - 13.02%, posisi 90 derajat sebesar ± 6.19% - 3.03 %. Untuk lebih jelasnya dapat dilihat pada **Gambar 4.11-4.12**

Pada percobaan koefisien lift oleh Sarpkaya (1977), Chakrabarti (1982a), Indiyono (1996) menunjukkan kenaikan Cl dengan rentang KC 3-7.5 dan pada silinder percobaan didapat kenaikan Cl yang sama pada rentang KC 2.867-7.224. bedanya dengan Chakrabarti ± 48.7% - 34.86%, dengan Sarpkaya ± 47.23- 19.49%, dengan Indiyono ± 9.26% - 3.09%

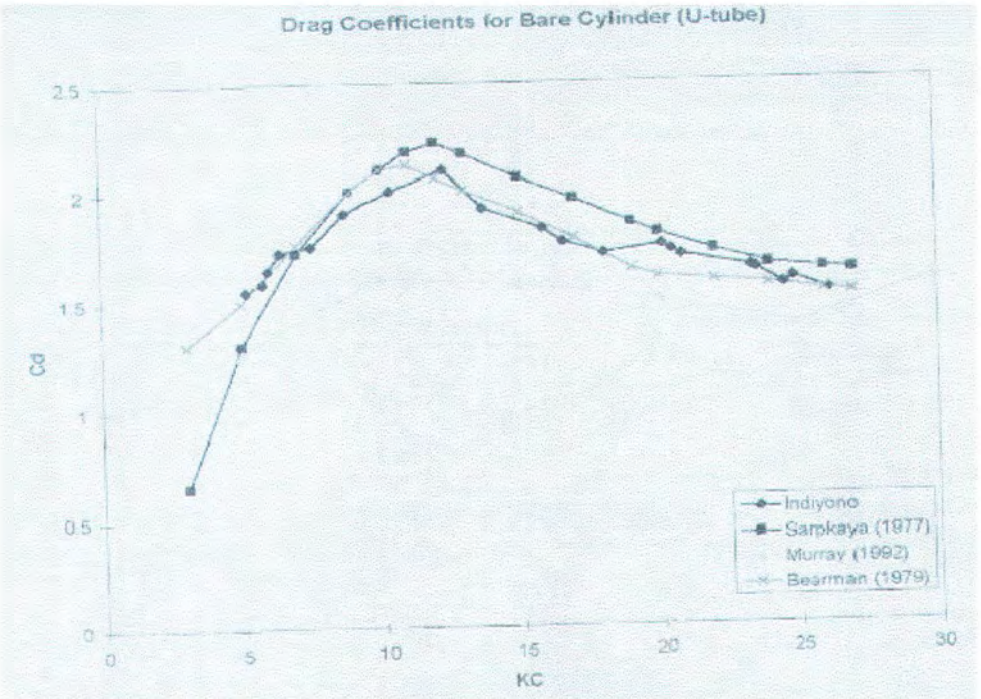
Penelitian Indiyono (1996) pada silinder dengan anode juga mengalami kenaikan pada KC 3-7.5 dan pada potongan kaki jaket dengan posisi 0,45,90 juga mengalami kenaikan Cl dengan KC berkisar 4.480-7.224, dengan perbedaan sebesar ± 2.88% - 8.47% untuk posisi 0 derajat, posisi 45 derajat sebesar ± 3.98% - 0.82%, untuk posisi 90 derajat sebesar ± 3.53% - 4.86%.

Pengaruh pemutaran model potongan kaki jaket pada posisi 0, 45. 90 derajat menghasilkan hasil yang paling besar pada posisi 90 kemudian 45 dan yang paling kecil pada posisi 0 derajat hal ini terjadi karena dimungkinkan pada posisi 45 dan 0 derajat terjadi *wake* pada aliran yang disebut *karman vortex street* yang timbul

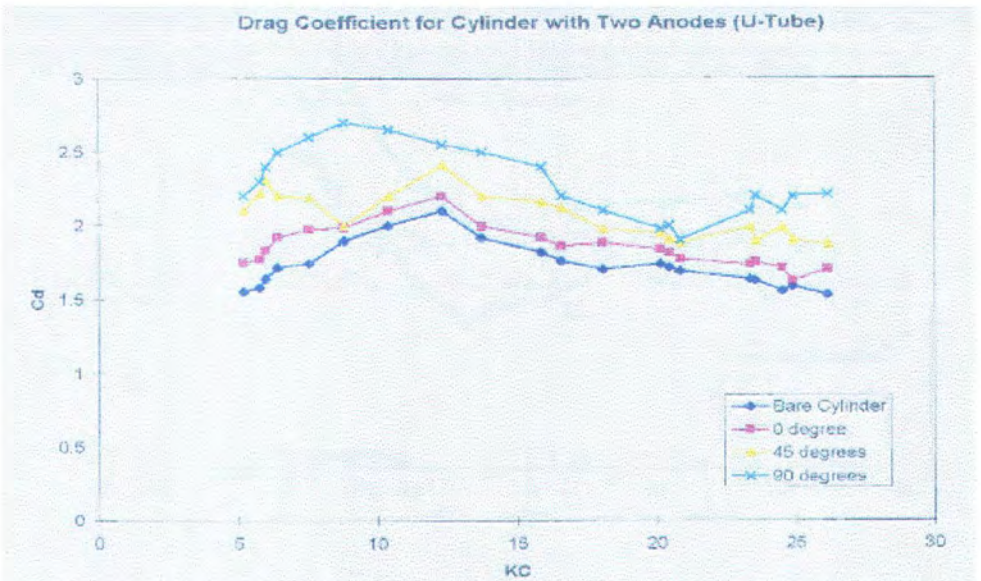
sebagai akibat adanya kenaikan kecepatan gelombang seiring dengan kenaikan KC, *wake* timbul pada silinder bagian depan (*upstream)* dan berpengaruh pada silinder bagian belakang (*downstream)*, sedangkan pada posisi 90 derajat *wake* tidak terjadi pada posisi ini, sehingga koefisien yang didapat juga menunjukkan hasil yang semakin besar pula. Seperti plot validasi **Gambar 4.15 – 4.20**.

Secara kualitas hasil seluruhnya dari silinder dan potongan kaki jaket untuk koefisien drag menunjukkan semakin meningkat dengan seiring kenaikan angka KC, untuk koefisien Inersia menunjukkan *trend* yang menurun seiring dengan kenaikan KC, dan begitu pula dengan koefisien lift juga semakin naik seiring kenaikan KC.

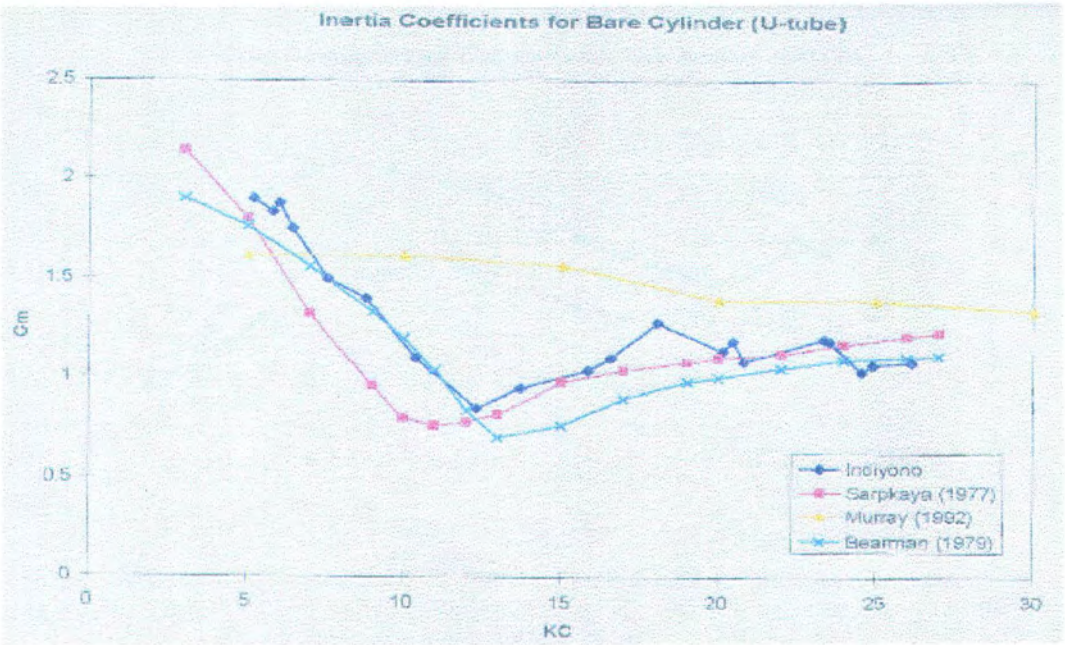
Secara kuantitas kenaikan koefisien drag, lift serta punurunan koefisien inersia karena adanya diameter efektif yang lebih banyak dari pada satu silinder.



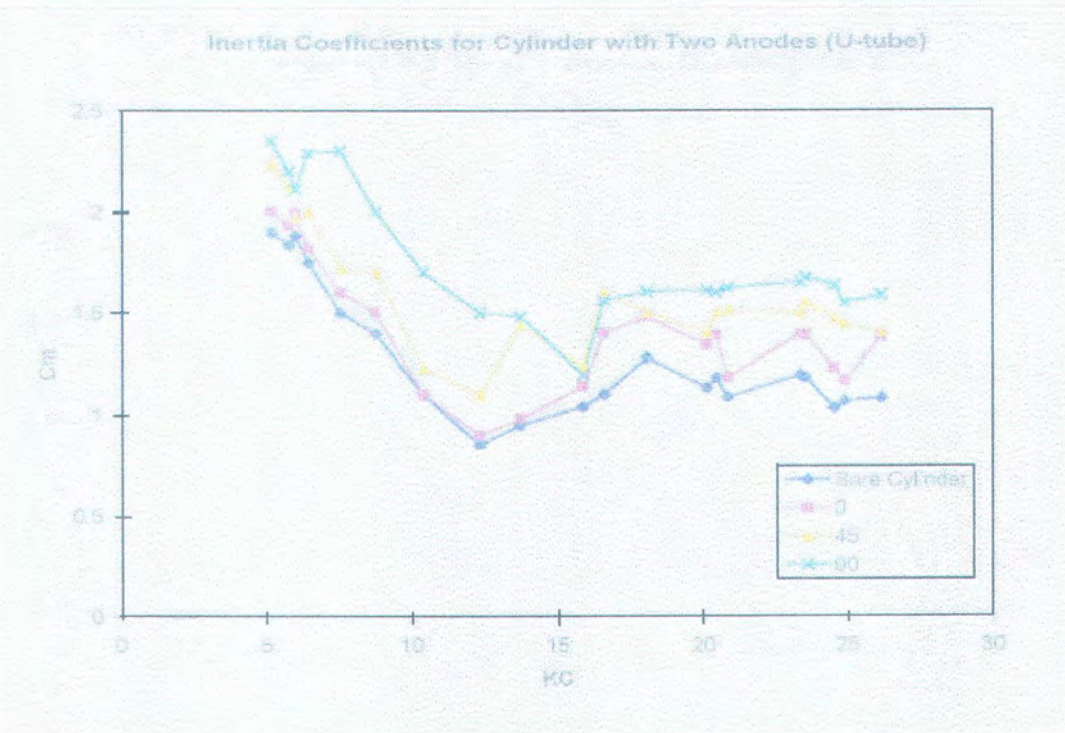
Gambar 4.9 Grafik validasi Cd untuk silinder (Indiyono, 1996)



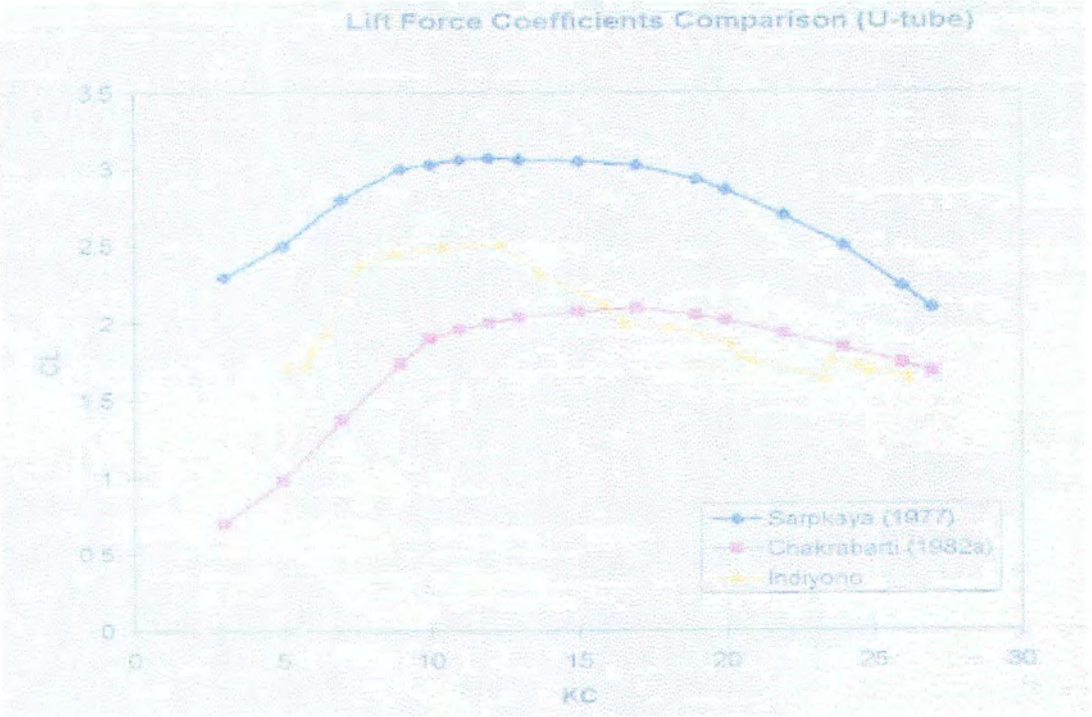
Gambar 4.10 Grafik validasi Cd untuk potongan kaki jacket (Indiyono, 1996)



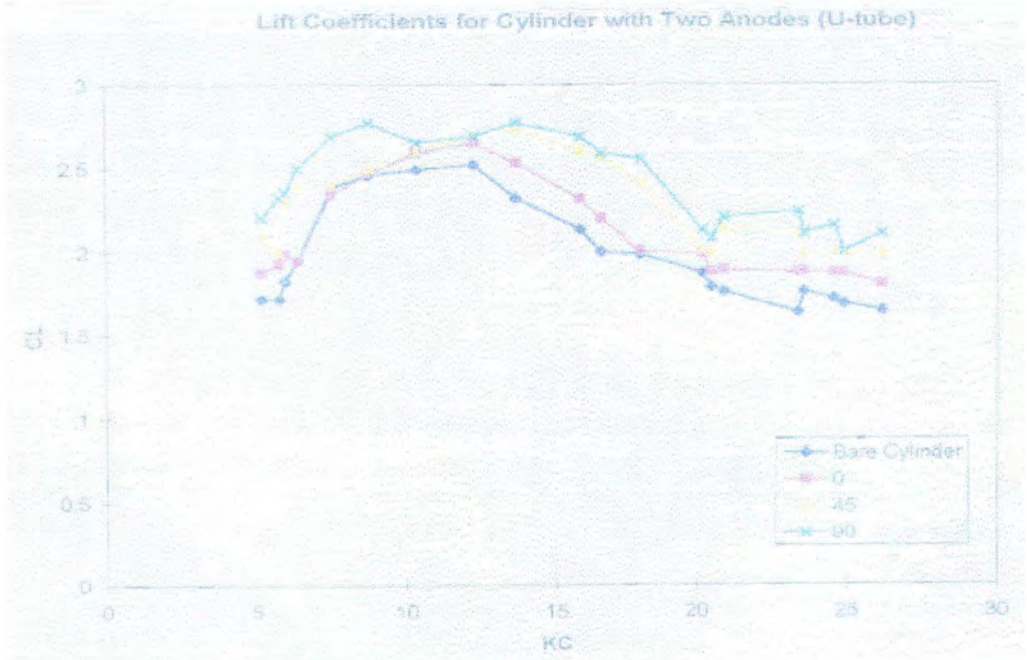
Gambar 4.11 Grafik validasi Cm untuk silinder



Gambar 4.12 Grafik validasi Cm untuk potongan kaki jacket



Gambar 4.13 Grafik validasi Cl untuk silinder



Gambar 4.14 Grafik validasi Cl untuk potongan kaki jacket

4.4 Kelemahan dan Kendala Percobaan

Percobaan yang dilakukan penulis bukanlah percobaan yang sempurna. Banyak hal yang dapat menyebabkan hasil percobaan ini tidak lagi akurat, beberapa kelemahan dan kendala saat percobaan diantaranya adalah :

- Kalibrasi

  Untuk mendapatkan hasil percobaan yang sempurna maka kalibrasi pada peralatan yang dipakai dalam pengujian sebaiknya dilakukan setiap kali akan dimulai percobaan tetapi pada percobaan ini hanya dilakukan sekali, yaitu saat pipa uji pertama kali dipasang, hal ini mengingat keterbatasan waktu yang ada.

- Material pipa uji

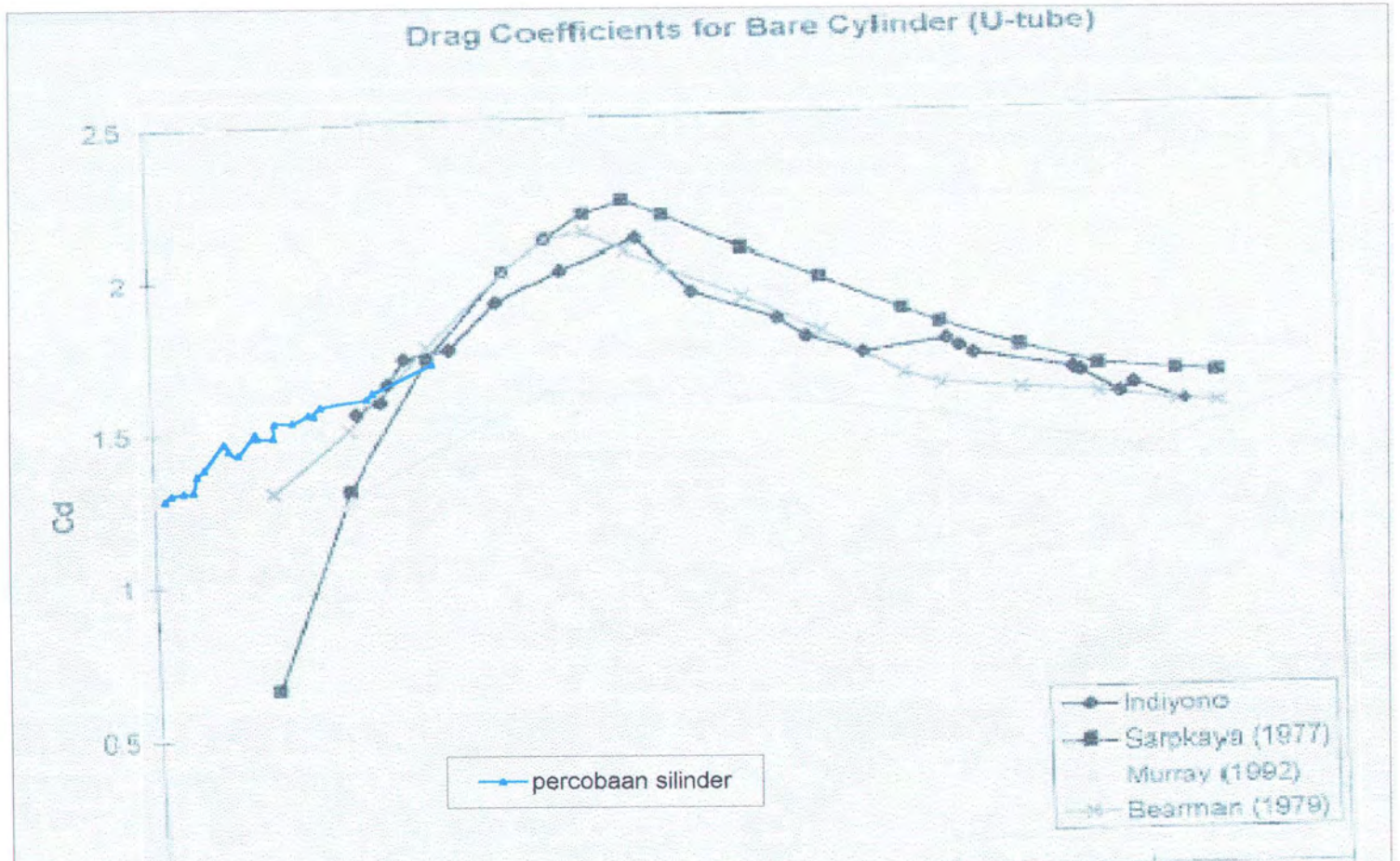
  Dalam percobaan ini material uji dibuatkan tutup pada ujung bawah dan dilubangi untuk mengurangi *bouyancy*, tetapi tidak menutup kemungkin masih terjadi *bouyancy* pada silinder dan potongan kaki jacket saat dimasukkan kedalam air sehingga akan berpengaruh sedikit banyak pada pembacaan Strain gauge.

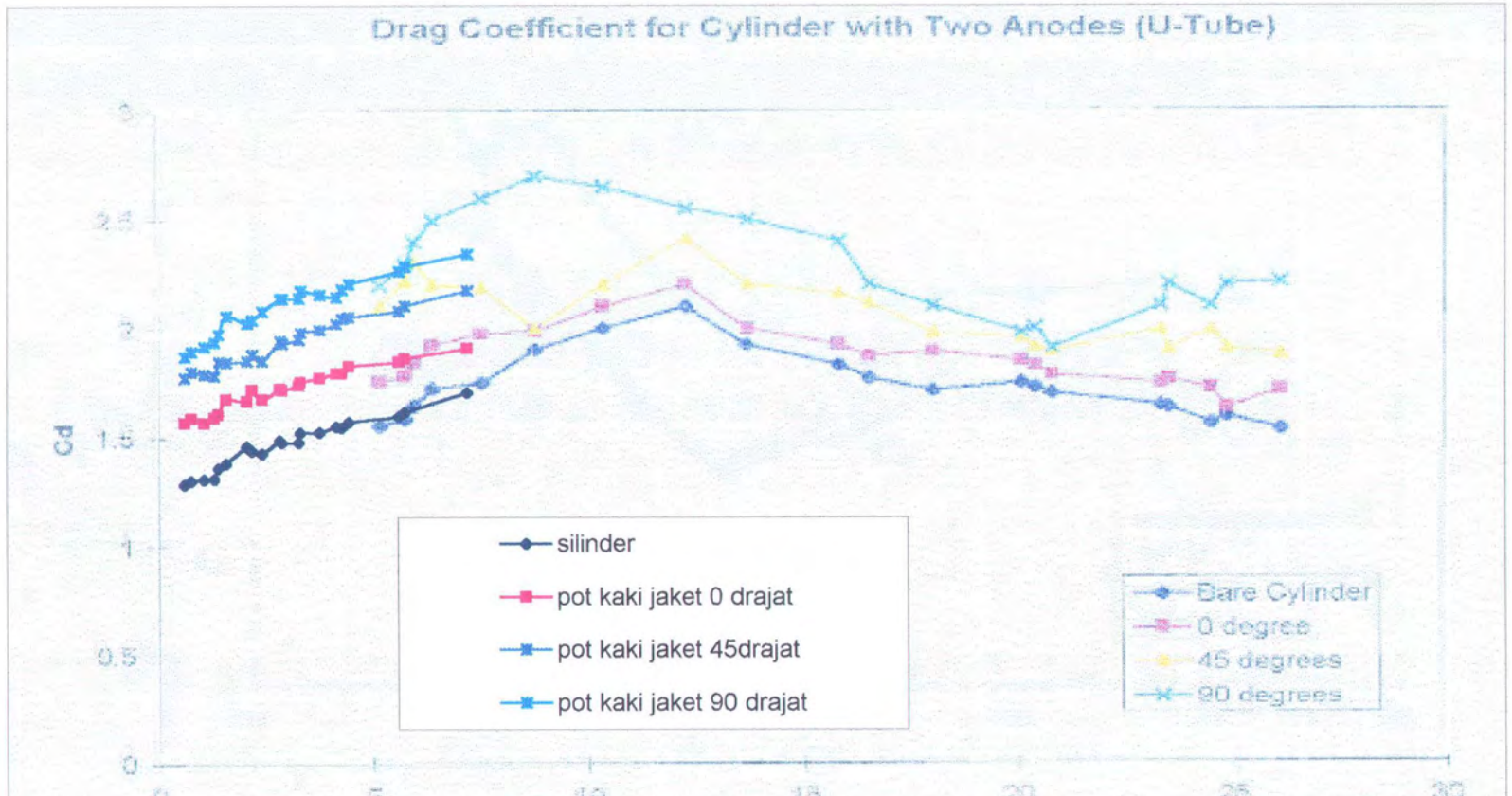
- Software pada channel ADC perlu ditambah.

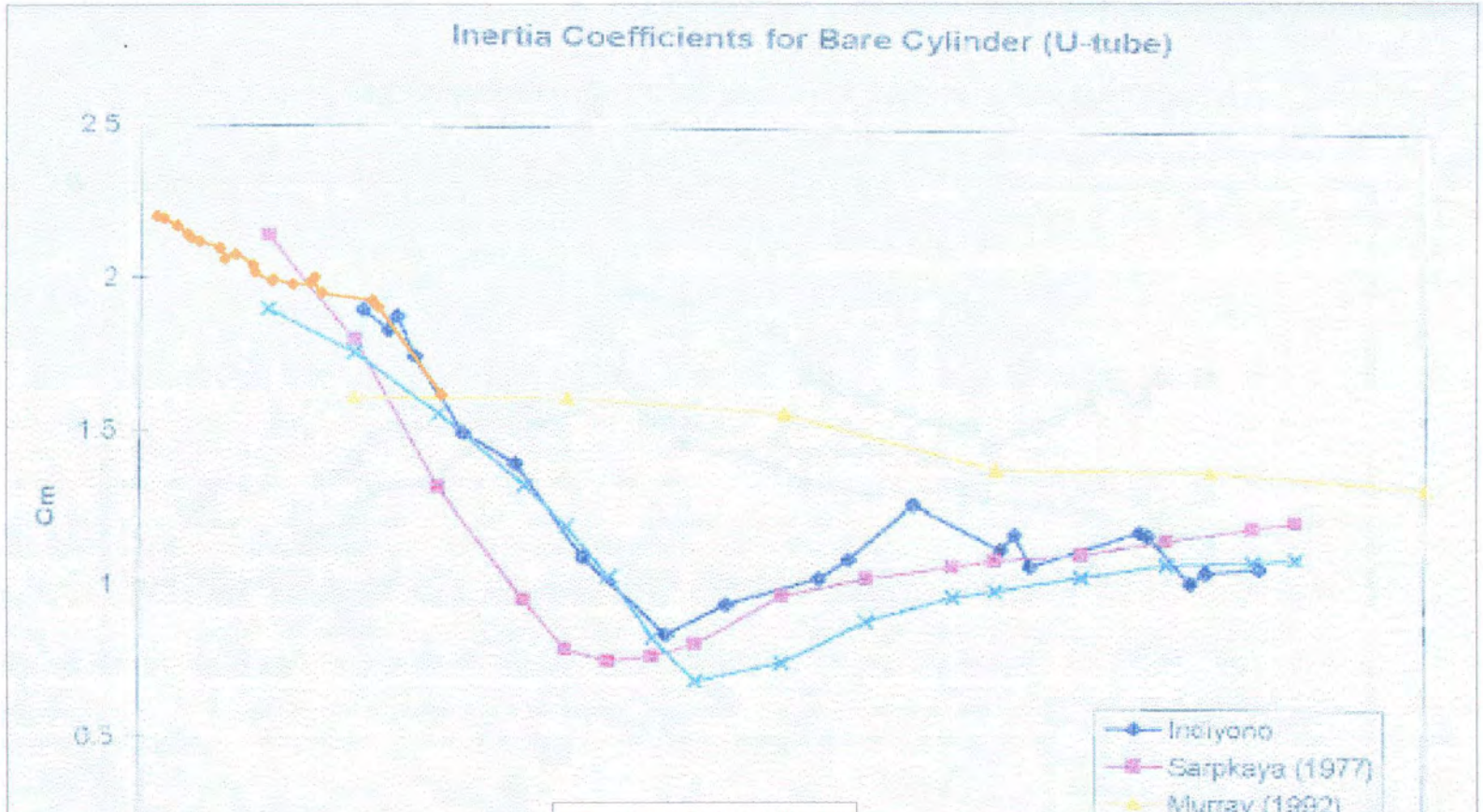
  Waktu perekaman data tinggi gelombang perlu menggunakan wave probe sedangkan channel yang tersedia hanya dua yang softwarenya dapat digunakan.

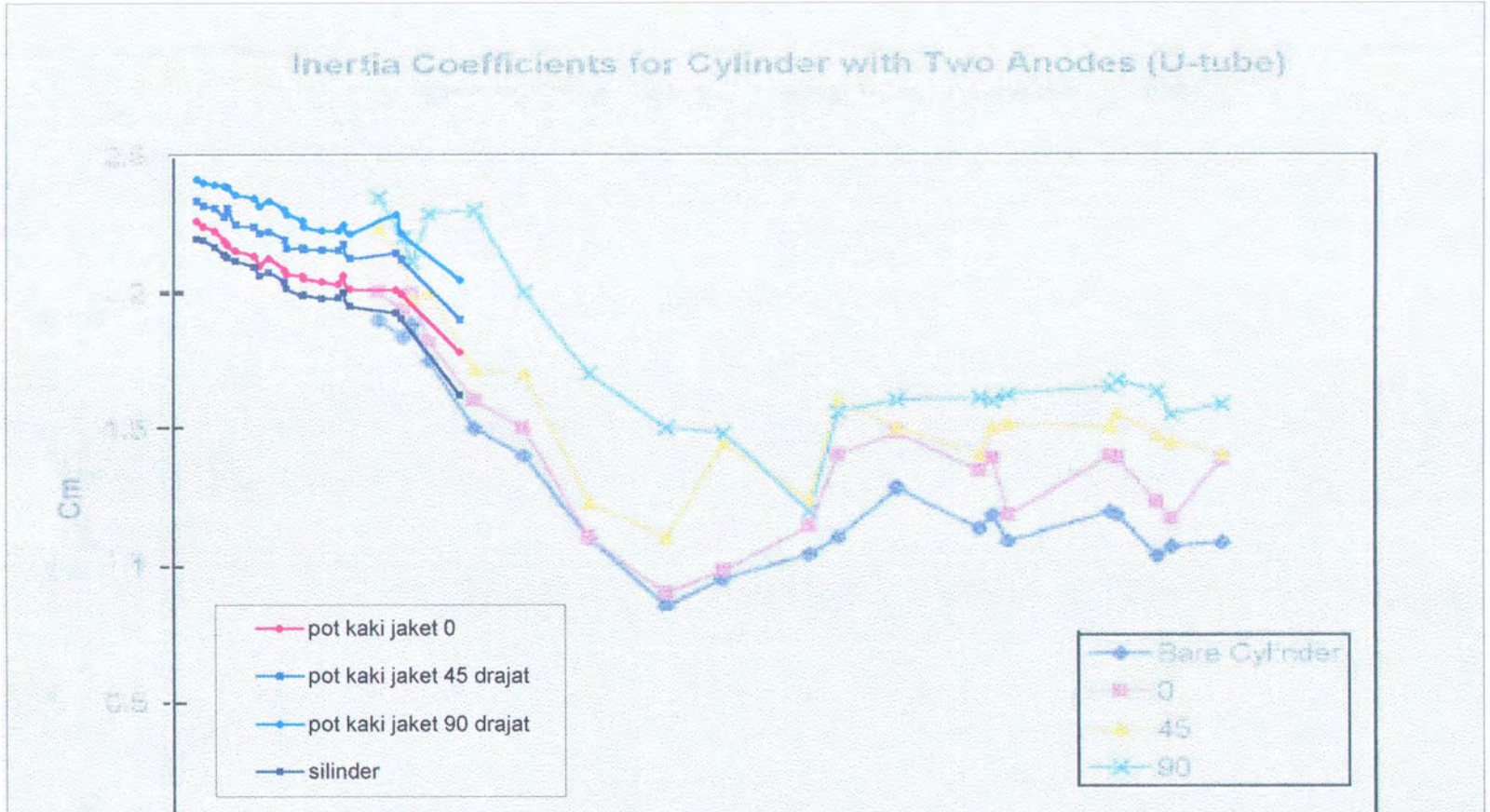
- Noise yang timbul pada waktu running.

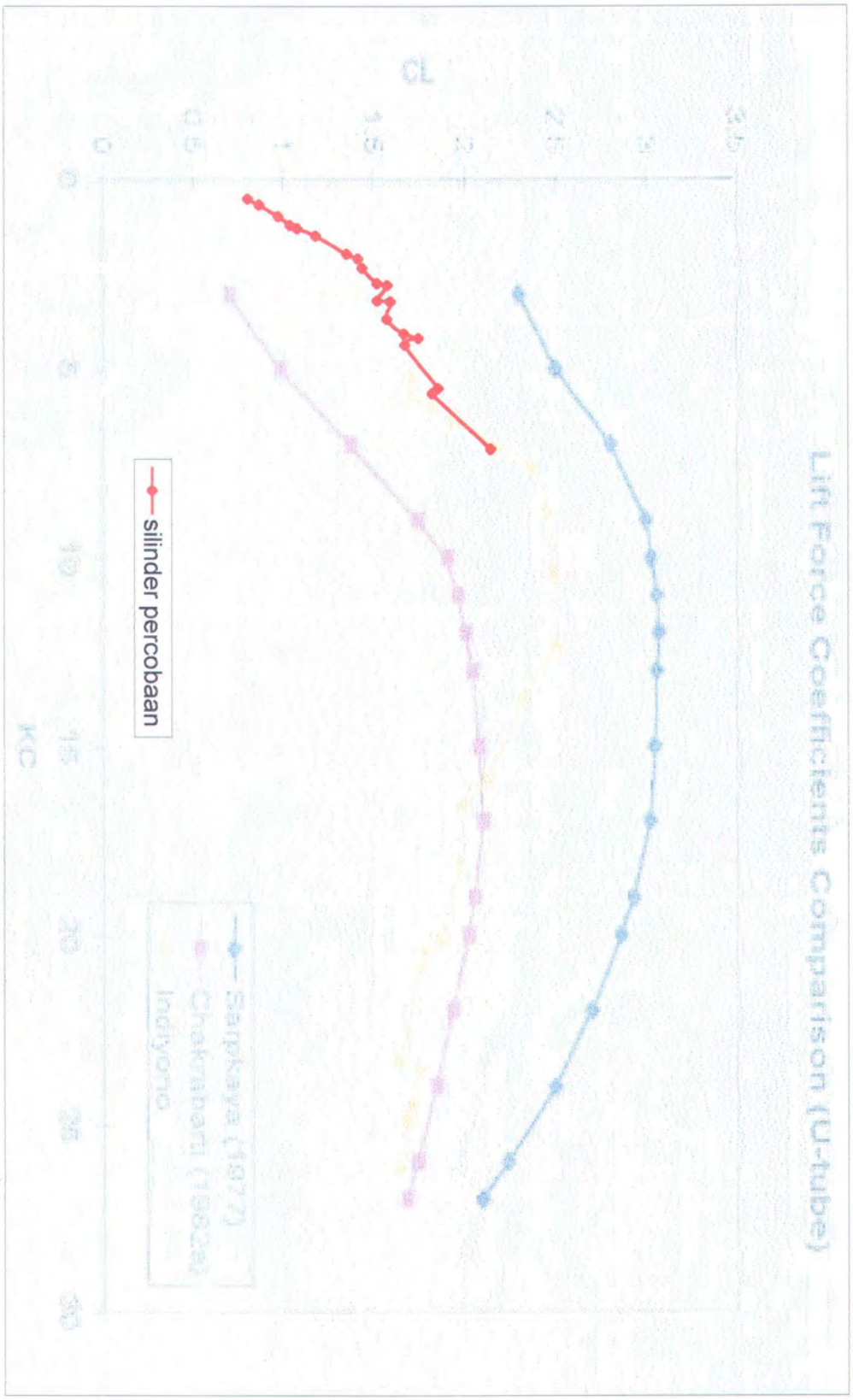
  Ketika proses *running* percobaan dimungkinkan ikut terjadi *noise* meskipun sudah diminimalkan dengan menggunakan *shielding* pada kabel dan *digrounding* sehingga mempengaruhi voltase yang terukur, dan menghasilkan hasil seperti diatas.


Drag Coefficients for Bare Cylinder (U-tube)
2.5
2
1.5
1
0.5
Cd
percobaan silinder
Indiyono
Sarpkaya (1977)
Murray (1992)
Bearman (1979)

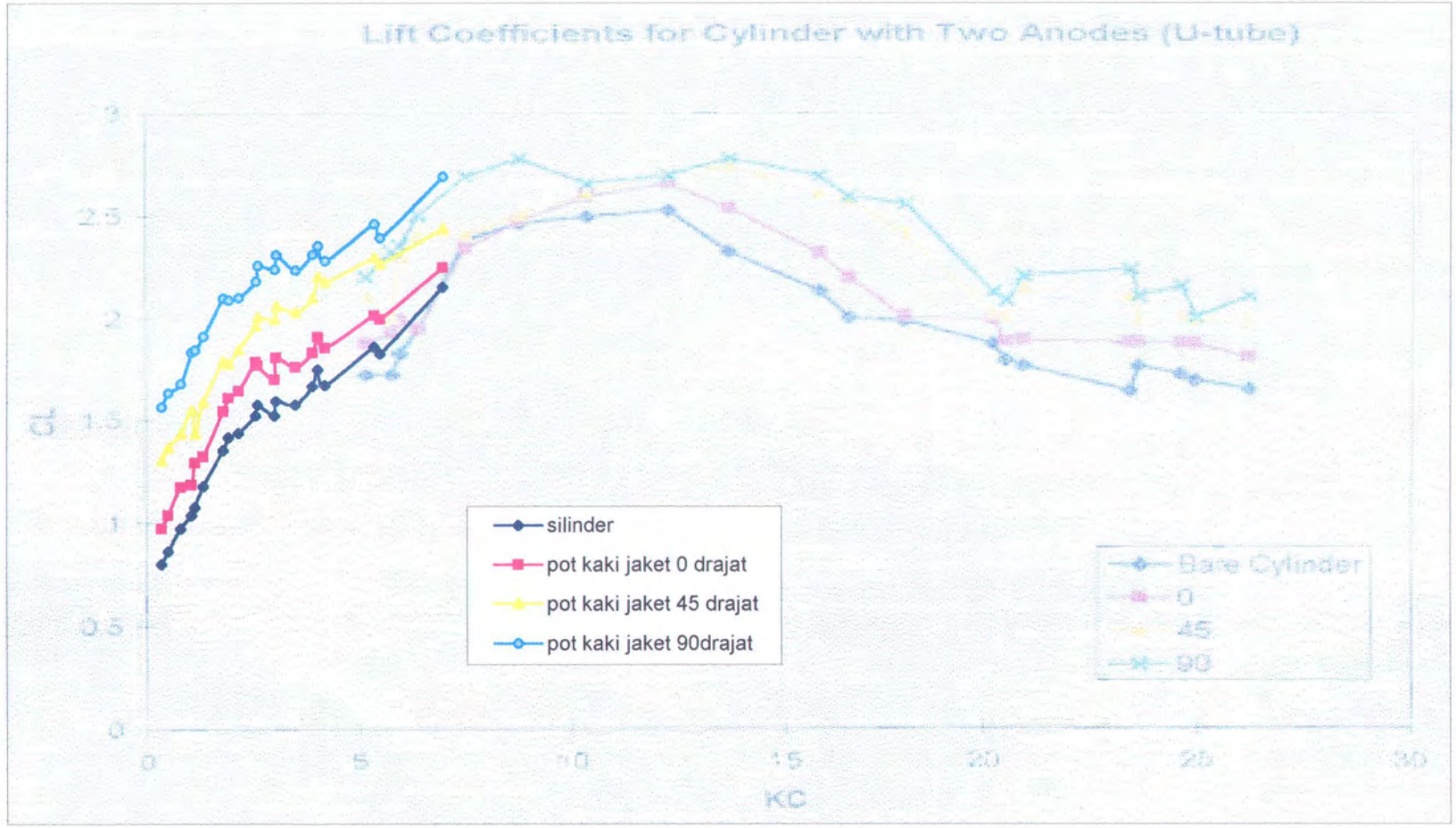

Drag Coefficient for Cylinder with Two Anodes (U-Tube)
Cd
2.5
2
1.5
1
0.5
0
silinder
pot kaki jaket 0 drajat
pot kaki jaket 45drajat
pot kaki jaket 90 drajat
Bare Cylinder
0 degree
45 degrees
90 degrees


Inertia Coefficients for Bare Cylinder (U-tube)
2.5
2
1.5
1
0.5
Cm
Indiyono
Sarpkaya (1977)
Murray (1992)


Inertia Coefficients for Cylinder with Two Anodes (U-tube)
Cm
2.5
2
1.5
1
0.5
pot kaki jaket 0
pot kaki jaket 45 drajat
pot kaki jaket 90 drajat
silinder
Bare Cylinder
0
45
90



Gambar 4.19 Perbandingan Cl silinder dan percobaan yang sudah ada (Indiyono,1996)


Lift Coefficients for Cylinder with Two Anodes (U-tube)
Cl
KC
0
0.5
1
1.5
2
2.5
3
0
5
10
15
20
25
30
silinder
pot kaki jaket 0 drajat
pot kaki jaket 45 drajat
pot kaki jaket 90drajat
Bare Cylinder
0
45
90

"Nilai manusia adalah bukan bagaimana ia mati-melainkan bagaimana ia hidup. Bukan apa yang telah ia peroleh-melainkan apa yang telah ia berikan. Bukan apa pangkatnya-melainkan tugas apa yang dapat ia laksanakan dengan sebaik-baiknya"

Ministry

BAB V
KESIMPULAN DAN SARAN

BAB V

KESIMPULAN DAN SARAN

5.1. Kesimpulan

Beberapa kesimpulan yang diambil ini berdasarkan hasil analisa yang terdapat dalam Bab IV, dan dengan mengacu pada tujuan yang hendak dicapai dari penulisan tugas akhir seperti yang tercantum dalam Bab I, diantaranya adalah :

1. Besarnya koefisien drag untuk silinder berada pada rentang angka Keulegan Carpenter (KC) 0.645-7.224 dengan nilai Cd 1.262 sampai 1.690.
2. Besarnya koefisien Inersia untuk silinder berada dalam rentang 2.194 sampai 1.615 pada rentang angka Keulegan Carpenter (KC) 0.645-7.224
3. Besarnya koefisien lift untuk silinder berada dalam rentang 0.772 –2.134 pada rentang angka Keulegan Carpenter 0.645-7.224 perbedaan.
4. Besarnya koefisien drag juga naik pada potongan kaki jacket posisi 0 drajat sebesar 1.550-1.898, pada posisi 45 drajat sebesar 1.764-2.171,dan posisi 90 sebesar 1.857-2.340 dengan rentang angka Keulegan Carpenter 0.645-7.224.
5. Besarnya koefisien inersia pada potongan kaki jacket posisi 0 drajat sebesar 2.260-1.775, pada posisi 45 drajat sebesar 2.336-1.897,dan posisi 90 sebesar 2.415-2.042 dengan rentang angka Keulegan Carpenter 0.645-7.224.
6. Besarnya koefisien Lift pada potongan kaki jacket posisi 0 drajat sebesar 0.946-2.231, pada posisi 45 drajat sebesar 1.278-2.420, dan posisi 90 sebesar 1.542-2.675 dengan rentang angka Keulegan Carpenter 0.645-7.224.

7. Secara kualitas kenaikan terjadi pada koefisien drag dan lift sedangkan penurunan terjadi pada koefisien inersia seiring kenaikan KC, secara kuantitas hal tersebut terjadi karena adanya diameter efektif yang lebih banyak.

5.2 Saran

berdasarkan pada percobaan yang telah dilaksanakan dan yang hasil yang telah dicapai, maka untuk penyempurnaan pengujian yang akan datang perlu diperhatikan beberapa hal, antara lain ;

1. Pada laboratorium, software channel ADC perlu ditambah agar dapat digunakan untuk pengukur wave probe.
2. Variasi tinggi gelombang dan periode dibuat lebih besar agar KC sebanding dengan percobaan pembanding yang telah dipublikasikan.
3. Perlu dilakukan percobaan yang dengan model 3 dimensi agar lebih baik hasil yang dicapai.

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LAMPIRAN I

beban kg	SG long volt	SG trans volt	konstanta kalibrasi long Kg/Volt	konstanta kalibrasi trans Kg/Volt	konstanta kalibrasi long N/Volt	konstanta kalibrasi trans N/Volt
1	0.02	0.015	50.00	66.67	490.50	654.00
1.5	0.04	0.03	37.50	50.00	367.88	490.50
2	0.06	0.045	33.33	44.44	327.00	436.00
2.5	0.08	0.06	31.25	41.67	306.56	408.75
				rata- rata	372.98	497.31

Nilai Cc untuk Strain Gauges Longitudinal : 372.98 N/V
Nilai Cc untuk Strain Gauges Transversal : 497.31 N/V

Tabel konstanta kalibrasi untuk strain gauges

Tabel regim validitas

					region validity		teori	
D (meter)	T (detik)	H (meter)	L (meter)	D/L	h/gt^2	D/gT^2	gelombang	d/L
0.05	1	0.02	1.56	0.03205128	0.0000204	0.0510	airy	0.51282051
0.05	1	0.04	1.56	0.03205128	0.0000408	0.0510	airy	0.51282051
0.05	1	0.06	1.56	0.03205128	0.0000612	0.0510	airy	0.51282051
0.05	1	0.08	1.56	0.03205128	0.0000815	0.0510	airy	0.51282051
0.05	1	0.1	1.56	0.03205128	0.0001019	0.0510	airy	0.51282051
0.05	2	0.02	4.85	0.01030928	0.0000051	0.0127	airy	0.16494845
0.05	2	0.04	4.85	0.01030928	0.0000102	0.0127	airy	0.16494845
0.05	2	0.06	4.85	0.01030928	0.0000153	0.0127	airy	0.16494845
0.05	2	0.08	4.85	0.01030928	0.0000204	0.0127	airy	0.16494845
0.05	2	0.1	4.85	0.01030928	0.0000255	0.0127	airy	0.16494845
0.05	3	0.02	7.9	0.00632911	0.0000023	0.0057	airy	0.10126582
0.05	3	0.04	7.9	0.00632911	0.0000045	0.0057	airy	0.10126582
0.05	3	0.06	7.9	0.00632911	0.0000068	0.0057	airy	0.10126582
0.05	3	0.08	7.9	0.00632911	0.0000091	0.0057	airy	0.10126582
0.05	3	0.1	7.9	0.00632911	0.0000113	0.0057	airy	0.10126582
0.05	4	0.02	10.83	0.00461681	0.0000013	0.0032	airy	0.07386888
0.05	4	0.04	10.83	0.00461681	0.0000025	0.0032	airy	0.07386888
0.05	4	0.06	10.83	0.00461681	0.0000038	0.0032	airy	0.07386888
0.05	4	0.08	10.83	0.00461681	0.0000051	0.0032	airy	0.07386888
0.05	4	0.1	10.83	0.00461681	0.0000064	0.0032	airy	0.07386888
0.1	1	0.02	1.56	0.06410256	0.0000204	0.1019	airy	0.51282051
0.1	1	0.04	1.56	0.06410256	0.0000408	0.1019	airy	0.51282051
0.1	1	0.06	1.56	0.06410256	0.0000612	0.1019	airy	0.51282051
0.1	1	0.08	1.56	0.06410256	0.0000815	0.1019	airy	0.51282051
0.1	1	0.1	1.56	0.06410256	0.0001019	0.1019	airy	0.51282051
0.1	2	0.02	4.85	0.02061856	0.0000051	0.0255	airy	0.16494845
0.1	2	0.04	4.85	0.02061856	0.0000102	0.0255	airy	0.16494845
0.1	2	0.06	4.85	0.02061856	0.0000153	0.0255	airy	0.16494845

LAMPIRAN II

Untuk Oscilatory flow Persamaan Morison untuk gaya perpanjang silinder dapat dituliskan sebagai berikut :

$$F(t) = A\,u(t)\,|u(t)| + B\dot{u}(t)$$

Sehingga dengan rumusan yang dipakai (Indiyono, 1996):

$$A = \frac{FU}{U|U|U}$$

$$B = \frac{F\dot{U}}{\dot{U}\dot{U}}$$

Rumus Morison dapat dicari koefisien drag maupun Inersia pada kondisi oscilatory flow yaitu :

$$Cd = \frac{A}{0.5\rho D}$$

$$Cm = \frac{B}{0.25\pi\rho D^2}$$

silinder tegak H2

del : SILINDER
isi : -
: 2 Cm

Perioda : 1 detik
waktu : 10 detik

tik	trans	longitu	F long	u	u dot	F*u	F* u dot	u^3	u dot^2	F trans
	Eta 2	Eta 1	N	m/det	m/det^2					N
0.01	-0.000454	0.004085	1.5237	0.0655	-0.0835	0.099776	-0.127151	0.000281	0.0070	-0.225541
0.02	-0.003969	0.005692	2.1229	0.0651	-0.1666	0.138192	-0.353613	0.000276	0.0277	-1.973906
0.03	-0.0079	0.0057	2.1229	0.0645	-0.2490	0.136824	-0.528674	0.000268	0.0620	-3.916533
0.04	-0.0036	0.0081	3.0217	0.0636	-0.3305	0.192037	-0.998726	0.000257	0.1092	-1.779643
0.05	-0.0055	0.0069	2.5723	0.0624	-0.4107	0.160518	-1.056426	0.000243	0.1687	-2.750957
0.06	-0.0036	0.0057	2.1229	0.0610	-0.4893	0.129509	-1.038619	0.000227	0.2394	-1.779643
0.07	-0.0020	0.0041	1.5237	0.0594	-0.5659	0.090459	-0.862203	0.000209	0.3202	-1.002592
0.08	-0.0032	0.0073	2.7221	0.0575	-0.6403	0.156515	-1.742869	0.000190	0.4099	-1.58538
0.09	-0.0040	0.0061	2.2727	0.0554	-0.7121	0.125906	-1.618451	0.000170	0.5071	-1.973906
0.1	-0.0055	0.0073	2.7221	0.0531	-0.7812	0.144497	-2.126466	0.000150	0.6103	-2.750957
0.11	-0.0020	0.0061	2.2727	0.0506	-0.8472	0.114899	-1.925323	0.000129	0.7177	-1.002592
0.12	-0.0051	0.0065	2.4225	0.0478	-0.9098	0.115869	-2.203947	0.000109	0.8277	-2.556694
0.13	0.0023	0.0093	3.4711	0.0449	-0.9688	0.155908	-3.362904	0.000091	0.9386	1.134298
0.14	-0.0075	0.0081	3.0217	0.0418	-1.0240	0.12638	-3.094343	0.000073	1.0487	-3.722271
0.15	-0.0032	0.0049	1.8233	0.0386	-1.0752	0.070318	-1.960402	0.000057	1.1561	-1.58538
0.16	-0.0024	0.0073	2.7221	0.0352	-1.1221	0.095703	-3.054576	0.000043	1.2592	-1.196855
0.17	-0.0032	0.0065	2.4225	0.0316	-1.1646	0.076574	-2.821331	0.000032	1.3564	-1.58538
0.18	-0.0032	0.0069	2.5723	0.0279	-1.2026	0.071862	-3.093301	0.000022	1.4461	-1.58538
0.19	-0.0016	0.0061	2.2727	0.0242	-1.2357	0.054895	-2.808367	0.000014	1.5270	-0.808329
0.2	-0.0087	0.0053	1.9731	0.0203	-1.2640	0.040006	-2.493941	0.000008	1.5977	-4.305059
0.21	-0.0083	0.0089	3.3213	0.0163	-1.2873	0.054196	-4.275462	0.000004	1.6571	-4.110796
0.22	-0.0008	0.0093	3.4711	0.0123	-1.3055	0.042677	-4.531522	0.000002	1.7043	-0.419804
0.23	-0.0024	0.0081	3.0217	0.0082	-1.3186	0.024849	-3.984283	0.000001	1.7386	-1.196855
0.24	-0.0059	0.0085	3.1715	0.0041	-1.3264	0.013066	-4.206728	0.000000	1.7594	-2.94522
0.25	-0.0032	0.0073	2.7221	0.0000	-1.3290	-6.84E-17	-3.61776	0.000000	1.7664	-1.58538
0.26	-0.0040	0.0069	2.5723	-0.0041	-1.3264	-0.010598	-3.411919	0.000000	1.7594	-1.973906
0.27	0.0007	0.0073	2.7221	-0.0082	-1.3186	-0.022385	-3.589233	-0.000001	1.7386	0.357247
0.28	-0.0051	0.0065	2.4225	-0.0123	-1.3055	-0.029784	-3.162543	-0.000002	1.7043	-2.556694
0.29	-0.0067	0.0101	3.7707	-0.0163	-1.2873	-0.061529	-4.853982	-0.000004	1.6571	-3.333745
0.3	-0.0008	0.0061	2.2727	-0.0203	-1.2640	-0.046081	-2.872642	-0.000008	1.5977	-0.419804
0.31	-0.0087	0.0049	1.8233	-0.0242	-1.2357	-0.04404	-2.253025	-0.000014	1.5270	-4.305059
0.32	-0.0063	0.0081	3.0217	-0.0279	-1.2026	-0.084418	-3.63374	-0.000022	1.4461	-3.139482
0.33	-0.0028	0.0089	3.3213	-0.0316	-1.1646	-0.104986	-3.868141	-0.000032	1.3564	-1.391118
0.34	-0.0051	0.0073	2.7221	-0.0352	-1.1221	-0.095703	-3.054576	-0.000043	1.2592	-2.556694
0.35	-0.0032	0.0077	2.8719	-0.0386	-1.0752	-0.110761	-3.087901	-0.000057	1.1561	-1.58538
0.36	-0.0075	0.0065	2.4225	-0.0418	-1.0240	-0.101318	-2.480721	-0.000073	1.0487	-3.722271
0.37	-0.0032	0.0057	2.1229	-0.0449	-0.9688	-0.095351	-2.056698	-0.000091	0.9386	-1.58538
0.38	-0.0001	0.0057	2.1229	-0.0478	-0.9098	-0.101539	-1.931368	-0.000109	0.8277	-0.031278
0.39	-0.0036	0.0065	2.4225	-0.0506	-0.8472	-0.122472	-2.052231	-0.000129	0.7177	-1.779643
0.4	-0.0012	0.0065	2.4225	-0.0531	-0.7812	-0.128593	-1.892416	-0.000150	0.6103	-0.614067
0.41	-0.0024	0.0081	3.0217	-0.0554	-0.7121	-0.167402	-2.151854	-0.000170	0.5071	-1.196855
0.42	-0.0051	0.0061	2.2727	-0.0575	-0.6403	-0.130675	-1.455125	-0.000190	0.4099	-2.556694
0.43	-0.0028	0.0077	2.8719	-0.0594	-0.5659	-0.170503	-1.625138	-0.000209	0.3202	-1.391118
0.44	-0.0048	0.0053	1.9731	-0.0610	-0.4893	-0.12037	-0.965328	-0.000227	0.2394	-2.362431
0.45	-0.0044	0.0065	2.4225	-0.0624	-0.4107	-0.15117	-0.994902	-0.000243	0.1687	-2.168169
0.46	-0.0028	0.0081	3.0217	-0.0636	-0.3305	-0.192037	-0.998726	-0.000257	0.1092	-1.391118
0.47	-0.0044	0.0057	2.1229	-0.0645	-0.2490	-0.136824	-0.528674	-0.000268	0.0620	-2.168169
0.48	-0.0059	0.0065	2.4225	-0.0651	-0.1666	-0.157696	-0.403519	-0.000276	0.0277	-2.94522
0.49	-0.0032	0.0073	2.7221	-0.0655	-0.0835	-0.178255	-0.227161	-0.000281	0.0070	-1.58538
0.5	-0.0032	0.0057	2.1229	-0.0656	0.0000	-0.139291	3.41E-15	-0.000282	0.0000	-1.58538
0.51	-0.0016	0.0057	2.1229	-0.0655	0.0835	-0.139016	0.177156	-0.000281	0.0070	-0.808329
0.52	-0.0083	0.0045	1.6735	-0.0651	0.1666	-0.108937	0.278753	-0.000276	0.0277	-4.110796
0.53	-0.0036	0.0061	2.2727	-0.0645	0.2490	-0.146479	0.565981	-0.000268	0.0620	-1.779643
0.54	-0.0067	0.0065	2.4225	-0.0636	0.3305	-0.153956	0.800675	-0.000257	0.1092	-3.333745
0.55	-0.0036	0.0065	2.4225	-0.0624	0.4107	-0.15117	0.994902	-0.000243	0.1687	-1.779643
0.56	-0.0028	0.0065	2.4225	-0.0610	0.4893	-0.147787	1.185203	-0.000227	0.2394	-1.391118
0.57	-0.0024	0.0041	1.5237	-0.0594	0.5659	-0.090459	0.862203	-0.000209	0.3202	-1.196855
0.58	-0.0094	0.0069	2.5723	-0.0575	0.6403	-0.147902	1.646954	-0.000190	0.4099	-4.693584
0.59	-0.0059	0.0041	1.5237	-0.0554	0.7121	-0.084411	1.085049	-0.000170	0.5071	-2.94522
0.6	-0.0028	0.0065	2.4225	-0.0531	0.7812	-0.128593	1.892416	-0.000150	0.6103	-1.391118
0.61	-0.0048	0.0065	2.4225	-0.0506	0.8472	-0.122472	2.052231	-0.000129	0.7177	-2.362431
0.62	-0.0079	0.0065	2.4225	-0.0478	0.9098	-0.115869	2.203947	-0.000109	0.8277	-3.916533
0.63	-0.0063	0.0061	2.2727	-0.0449	0.9688	-0.10208	2.201831	-0.000091	0.9386	-3.139482
0.64	-0.0044	0.0065	2.4225	-0.0418	1.0240	-0.101318	2.480721	-0.000073	1.0487	-2.168169
0.65	-0.0048	0.0065	2.4225	-0.0386	1.0752	-0.093428	2.604687	-0.000057	1.1561	-2.362431

silinder tegak H2

0.66	-0.0020	0.0061	2.2727	-0.0352	1.1221	-0.079902	2.550271	-0.000043	1.2592	-1.002592
0.67	-0.0044	0.0081	3.0217	-0.0316	1.1646	-0.095516	3.519204	-0.000032	1.3564	-2.168169
0.68	-0.0044	0.0081	3.0217	-0.0279	1.2026	-0.084418	3.63374	-0.000022	1.4461	-2.168169
0.69	-0.0044	0.0057	2.1229	-0.0242	1.2357	-0.051276	2.623253	-0.000014	1.5270	-2.168169
0.7	-0.0067	0.0081	3.0217	-0.0203	1.2640	-0.061268	3.819396	-0.000008	1.5977	-3.333745
0.71	-0.0048	0.0045	1.6735	-0.0163	1.2873	-0.027307	2.154221	-0.000004	1.6571	-2.362431
0.72	-0.0032	0.0061	2.2727	-0.0123	1.3055	-0.027942	2.966974	-0.000002	1.7043	-1.58538
0.73	-0.0020	0.0081	3.0217	-0.0082	1.3186	-0.024849	3.984283	-0.000001	1.7386	-1.002592
0.74	-0.0028	0.0069	2.5723	-0.0041	1.3264	-0.010598	3.411919	0.000000	1.7594	-1.391118
0.75	-0.0024	0.0077	2.8719	0.0000	1.3290	4.67E-16	3.816855	0.000000	1.7664	-1.196855
0.76	-0.0032	0.0065	2.4225	0.0041	1.3264	0.009981	3.213217	0.000000	1.7594	-1.58538
0.77	-0.0044	0.0057	2.1229	0.0082	1.3186	0.017458	2.799133	0.000001	1.7386	-2.168169
0.78	-0.0044	0.0057	2.1229	0.0123	1.3055	0.0261	2.771406	0.000002	1.7043	-2.168169
0.79	-0.0067	0.0069	2.5723	0.0163	1.2873	0.041974	3.311261	0.000004	1.6571	-3.333745
0.8	-0.0036	0.0065	2.4225	0.0203	1.2640	0.049118	3.061993	0.000008	1.5977	-1.779643
0.81	-0.0071	0.0057	2.1229	0.0242	1.2357	0.051276	2.623253	0.000014	1.5270	-3.528008
0.82	-0.0051	0.0057	2.1229	0.0279	1.2026	0.059307	2.552861	0.000022	1.4461	-2.556694
0.83	-0.0063	0.0077	2.8719	0.0316	1.1646	0.09078	3.344736	0.000032	1.3564	-3.139482
0.84	-0.0048	0.0073	2.7221	0.0352	1.1221	0.095703	3.054576	0.000043	1.2592	-2.362431
0.85	-0.0020	0.0073	2.7221	0.0386	1.0752	0.104983	2.926829	0.000057	1.1561	-1.002592
0.86	-0.0051	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-2.556694
0.87	-0.0005	0.0069	2.5723	0.0449	0.9688	0.115537	2.4921	0.000091	0.9386	-0.225541
0.88	-0.0063	0.0061	2.2727	0.0478	0.9098	0.108704	2.067657	0.000109	0.8277	-3.139482
0.89	-0.0059	0.0065	2.4225	0.0506	0.8472	0.122472	2.052231	0.000129	0.7177	-2.94522
0.9	-0.0016	0.0077	2.8719	0.0531	0.7812	0.152449	2.243491	0.000150	0.6103	-0.808329
0.91	-0.0032	0.0057	2.1229	0.0554	0.7121	0.117607	1.511771	0.000170	0.5071	-1.58538
0.92	-0.0036	0.0069	2.5723	0.0575	0.6403	0.147902	1.646954	0.000190	0.4099	-1.779643
0.93	-0.0028	0.0065	2.4225	0.0594	0.5659	0.143822	1.370826	0.000209	0.3202	-1.391118
0.94	-0.0067	0.0061	2.2727	0.0610	0.4893	0.138648	1.111911	0.000227	0.2394	-3.333745
0.95	-0.0044	0.0073	2.7221	0.0624	0.4107	0.169866	1.117949	0.000243	0.1687	-2.168169
0.96	-0.0044	0.0073	2.7221	0.0636	0.3305	0.172996	0.8997	0.000257	0.1092	-2.168169
0.97	-0.0036	0.0053	1.9731	0.0645	0.2490	0.127168	0.491367	0.000268	0.0620	-1.779643
0.98	-0.0063	0.0069	2.5723	0.0651	0.1666	0.167448	0.428472	0.000276	0.0277	-3.139482
0.99	-0.0044	0.0065	2.4225	0.0655	0.0835	0.158636	0.202158	0.000281	0.0070	-2.168169
1	-0.0028	0.0061	2.2727	0.0656	0.0000	0.14912	-1.27E-14	0.000282	0.0000	-1.391118
1.01	-0.0044	0.0061	2.2727	0.0655	-0.0835	0.148826	-0.189657	0.000281	0.0070	-2.168169
1.02	-0.0036	0.0053	1.9731	0.0651	-0.1666	0.128441	-0.328659	0.000276	0.0277	-1.779643
1.03	-0.0067	0.0057	2.1229	0.0645	-0.2490	0.136824	-0.528674	0.000268	0.0620	-3.333745
1.04	-0.0005	0.0053	1.9731	0.0636	-0.3305	0.125394	-0.652136	0.000257	0.1092	-0.225541
1.05	-0.0044	0.0069	2.5723	0.0624	-0.4107	0.160518	-1.056426	0.000243	0.1687	-2.168169
1.06	-0.0063	0.0105	3.9205	0.0610	-0.4893	0.239177	-1.918121	0.000227	0.2394	-3.139482
1.07	-0.0008	0.0065	2.4225	0.0594	-0.5659	0.143822	-1.370826	0.000209	0.3202	-0.419804
1.08	-0.0040	0.0069	2.5723	0.0575	-0.6403	0.147902	-1.646954	0.000190	0.4099	-1.973906
1.09	-0.0032	0.0053	1.9731	0.0554	-0.7121	0.109308	-1.405091	0.000170	0.5071	-1.58538
1.1	-0.0044	0.0065	2.4225	0.0531	-0.7812	0.128593	-1.892416	0.000150	0.6103	-2.168169
1.11	-0.0036	0.0057	2.1229	0.0506	-0.8472	0.107325	-1.798415	0.000129	0.7177	-1.779643
1.12	-0.0059	0.0073	2.7221	0.0478	-0.9098	0.130199	-2.476527	0.000109	0.8277	-2.94522
1.13	-0.0036	0.0081	3.0217	0.0449	-0.9688	0.135723	-2.927502	0.000091	0.9386	-1.779643
1.14	-0.0032	0.0077	2.8719	0.0418	-1.0240	0.120114	-2.940937	0.000073	1.0487	-1.58538
1.15	-0.0028	0.0077	2.8719	0.0386	-1.0752	0.110761	-3.087901	0.000057	1.1561	-1.391118
1.16	-0.0040	0.0053	1.9731	0.0352	-1.1221	0.069369	-2.214068	0.000043	1.2592	-1.973906
1.17	-0.0048	0.0061	2.2727	0.0316	-1.1646	0.071839	-2.646862	0.000032	1.3564	-2.362431
1.18	-0.0102	0.0065	2.4225	0.0279	-1.2026	0.067677	-2.913154	0.000022	1.4461	-5.08211
1.19	-0.0048	0.0061	2.2727	0.0242	-1.2357	0.054895	-2.808367	0.000014	1.5270	-2.362431
1.2	-0.0071	0.0081	3.0217	0.0203	-1.2640	0.061268	-3.819396	0.000008	1.5977	-3.528008
1.21	-0.0040	0.0065	2.4225	0.0163	-1.2873	0.039529	-3.118421	0.000004	1.6571	-1.973906
1.22	0.0007	0.0073	2.7221	0.0123	-1.3055	0.033468	-3.55368	0.000002	1.7043	0.357247
1.23	-0.0055	0.0065	2.4225	0.0082	-1.3186	0.019922	-3.194183	0.000001	1.7386	-2.750957
1.24	-0.0044	0.0085	3.1715	0.0041	-1.3264	0.013066	-4.206728	0.000000	1.7594	-2.168169
1.25	-0.0051	0.0065	2.4225	0.0000	-1.3290	-7.98E-16	-3.21957	0.000000	1.7664	-2.556694
1.26	-0.0028	0.0073	2.7221	-0.0041	-1.3264	-0.011215	-3.610621	0.000000	1.7594	-1.391118
1.27	-0.0048	0.0073	2.7221	-0.0082	-1.3186	-0.022385	-3.589233	-0.000001	1.7386	-2.362431
1.28	-0.0044	0.0065	2.4225	-0.0123	-1.3055	-0.029784	-3.162543	-0.000002	1.7043	-2.168169
1.29	-0.0036	0.0065	2.4225	-0.0163	-1.2873	-0.039529	-3.118421	-0.000004	1.6571	-1.779643
1.3	-0.0008	0.0077	2.8719	-0.0203	-1.2640	-0.05823	-3.630045	-0.000008	1.5977	-0.419804
1.31	-0.0036	0.0057	2.1229	-0.0242	-1.2357	-0.051276	-2.623253	-0.000014	1.5270	-1.779643
1.32	-0.0032	0.0073	2.7221	-0.0279	-1.2026	-0.076047	-3.273447	-0.000022	1.4461	-1.58538
1.33	-0.0051	0.0057	2.1229	-0.0316	-1.1646	-0.067104	-2.472394	-0.000032	1.3564	-2.556694
1.34	-0.0063	0.0065	2.4225	-0.0352	-1.1221	-0.085169	-2.718373	-0.000043	1.2592	-3.139482
1.35	-0.0075	0.0069	2.5723	-0.0386	-1.0752	-0.099206	-2.765758	-0.000057	1.1561	-3.722271
1.36	-0.0032	0.0061	2.2727	-0.0418	-1.0240	-0.095053	-2.327316	-0.000073	1.0487	-1.58538

silinder tegak H2

1.37	-0.0071	0.0053	1.9731	-0.0449	-0.9688	-0.088622	-1.911564	-0.000091	0.9386	-3.528008
1.38	-0.0036	0.0077	2.8719	-0.0478	-0.9098	-0.137365	-2.612817	-0.000109	0.8277	-1.779643
1.39	-0.0040	0.0073	2.7221	-0.0506	-0.8472	-0.13762	-2.306047	-0.000129	0.7177	-1.973906
1.4	-0.0051	0.0081	3.0217	-0.0531	-0.7812	-0.160401	-2.360516	-0.000150	0.6103	-2.556694
1.41	-0.0036	0.0073	2.7221	-0.0554	-0.7121	-0.150804	-1.938493	-0.000170	0.5071	-1.779643
1.42	-0.0040	0.0077	2.8719	-0.0575	-0.6403	-0.165129	-1.838784	-0.000190	0.4099	-1.973906
1.43	-0.0044	0.0065	2.4225	-0.0594	-0.5659	-0.143822	-1.370826	-0.000209	0.3202	-2.168169
1.44	-0.0044	0.0069	2.5723	-0.0610	-0.4893	-0.156926	-1.258495	-0.000227	0.2394	-2.168169
1.45	-0.0044	0.0049	1.8233	-0.0624	-0.4107	-0.113777	-0.748807	-0.000243	0.1687	-2.168169
1.46	-0.0040	0.0049	1.8233	-0.0636	-0.3305	-0.115874	-0.602623	-0.000257	0.1092	-1.973906
1.47	-0.0059	0.0069	2.5723	-0.0645	-0.2490	-0.165789	-0.640594	-0.000268	0.0620	-2.94522
1.48	-0.0051	0.0081	3.0217	-0.0651	-0.1666	-0.196703	-0.503332	-0.000276	0.0277	-2.556694
1.49	-0.0048	0.0061	2.2727	-0.0655	-0.0835	-0.148826	-0.189657	-0.000281	0.0070	-2.362431
1.5	-0.0036	0.0049	1.8233	-0.0656	0.0000	-0.119632	1.63E-14	-0.000282	0.0000	-1.779643
1.51	-0.0036	0.0053	1.9731	-0.0655	0.0835	-0.129206	0.164655	-0.000281	0.0070	-1.779643
1.52	-0.0044	0.0053	1.9731	-0.0651	0.1666	-0.128441	0.328659	-0.000276	0.0277	-2.168169
1.53	-0.0024	0.0065	2.4225	-0.0645	0.2490	-0.156134	0.603287	-0.000268	0.0620	-1.196855
1.54	-0.0016	0.0081	3.0217	-0.0636	0.3305	-0.192037	0.998726	-0.000257	0.1092	-0.808329
1.55	-0.0024	0.0057	2.1229	-0.0624	0.4107	-0.132473	0.871854	-0.000243	0.1687	-1.196855
1.56	-0.0040	0.0053	1.9731	-0.0610	0.4893	-0.12037	0.965328	-0.000227	0.2394	-1.973906
1.57	-0.0040	0.0053	1.9731	-0.0594	0.5659	-0.11714	1.116515	-0.000209	0.3202	-1.973906
1.58	-0.0044	0.0089	3.3213	-0.0575	0.6403	-0.190969	2.126528	-0.000190	0.4099	-2.168169
1.59	-0.0048	0.0049	1.8233	-0.0554	0.7121	-0.101009	1.29841	-0.000170	0.5071	-2.362431
1.6	-0.0048	0.0073	2.7221	-0.0531	0.7812	-0.144497	2.126466	-0.000150	0.6103	-2.362431
1.61	-0.0044	0.0057	2.1229	-0.0506	0.8472	-0.107325	1.798415	-0.000129	0.7177	-2.168169
1.62	-0.0048	0.0073	2.7221	-0.0478	0.9098	-0.130199	2.476527	-0.000109	0.8277	-2.362431
1.63	-0.0048	0.0057	2.1229	-0.0449	0.9688	-0.095351	2.056698	-0.000091	0.9386	-2.362431
1.64	-0.0063	0.0065	2.4225	-0.0418	1.0240	-0.101318	2.480721	-0.000073	1.0487	-3.139482
1.65	-0.0051	0.0061	2.2727	-0.0386	1.0752	-0.087651	2.443616	-0.000057	1.1561	-2.556694
1.66	-0.0071	0.0065	2.4225	-0.0352	1.1221	-0.085169	2.718373	-0.000043	1.2592	-3.528008
1.67	-0.0036	0.0069	2.5723	-0.0316	1.1646	-0.08131	2.995799	-0.000032	1.3564	-1.779643
1.68	-0.0040	0.0073	2.7221	-0.0279	1.2026	-0.076047	3.273447	-0.000022	1.4461	-1.973906
1.69	-0.0028	0.0085	3.1715	-0.0242	1.2357	-0.076605	3.91905	-0.000014	1.5270	-1.391118
1.7	-0.0032	0.0093	3.4711	-0.0203	1.2640	-0.07038	4.387448	-0.000008	1.5977	-1.58538
1.71	-0.0106	0.0081	3.0217	-0.0163	1.2873	-0.049307	3.889782	-0.000004	1.6571	-5.276373
1.72	-0.0016	0.0065	2.4225	-0.0123	1.3055	-0.029784	3.162543	-0.000002	1.7043	-0.808329
1.73	-0.0055	0.0077	2.8719	-0.0082	1.3186	-0.023617	3.786758	-0.000001	1.7386	-2.750957
1.74	-0.0063	0.0081	3.0217	-0.0041	1.3264	-0.012449	4.008026	0.000000	1.7594	-3.139482
1.75	-0.0063	0.0069	2.5723	0.0000	1.3290	1.43E-15	3.418665	0.000000	1.7664	-3.139482
1.76	-0.0044	0.0057	2.1229	0.0041	1.3264	0.008746	2.815813	0.000000	1.7594	-2.168169
1.77	-0.0051	0.0069	2.5723	0.0082	1.3186	0.021154	3.391708	0.000001	1.7386	-2.556694
1.78	-0.0036	0.0073	2.7221	0.0123	1.3055	0.033468	3.55368	0.000002	1.7043	-1.779643
1.79	-0.0048	0.0057	2.1229	0.0163	1.2873	0.03464	2.732741	0.000004	1.6571	-2.362431
1.8	-0.0032	0.0081	3.0217	0.0203	1.2640	0.061268	3.819396	0.000008	1.5977	-1.58538
1.81	-0.0044	0.0065	2.4225	0.0242	1.2357	0.058513	2.99348	0.000014	1.5270	-2.168169
1.82	-0.0044	0.0053	1.9731	0.0279	1.2026	0.055122	2.372714	0.000022	1.4461	-2.168169
1.83	-0.0044	0.0065	2.4225	0.0316	1.1646	0.076574	2.821331	0.000032	1.3564	-2.168169
1.84	-0.0051	0.0073	2.7221	0.0352	1.1221	0.095703	3.054576	0.000043	1.2592	-2.556694
1.85	-0.0036	0.0057	2.1229	0.0386	1.0752	0.081873	2.282544	0.000057	1.1561	-1.779643
1.86	-0.0032	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-1.58538
1.87	-0.0024	0.0093	3.4711	0.0449	0.9688	0.155908	3.362904	0.000091	0.9386	-1.196855
1.88	-0.0036	0.0081	3.0217	0.0478	0.9098	0.14453	2.749107	0.000109	0.8277	-1.779643
1.89	-0.0071	0.0077	2.8719	0.0506	0.8472	0.145193	2.432955	0.000129	0.7177	-3.528008
1.9	-0.0040	0.0077	2.8719	0.0531	0.7812	0.152449	2.243491	0.000150	0.6103	-1.973906
1.91	-0.0040	0.0073	2.7221	0.0554	0.7121	0.150804	1.938493	0.000170	0.5071	-1.973906
1.92	-0.0001	0.0045	1.6735	0.0575	0.6403	0.096221	1.071466	0.000190	0.4099	-0.031278
1.93	-0.0055	0.0053	1.9731	0.0594	0.5659	0.11714	1.116515	0.000209	0.3202	-2.750957
1.94	0.0011	0.0069	2.5723	0.0610	0.4893	0.156926	1.258495	0.000227	0.2394	0.55151
1.95	-0.0059	0.0093	3.4711	0.0624	0.4107	0.216607	1.425568	0.000243	0.1687	-2.94522
1.96	-0.0048	0.0101	3.7707	0.0636	0.3305	0.23964	1.246291	0.000257	0.1092	-2.362431
1.97	-0.0040	0.0073	2.7221	0.0645	0.2490	0.175444	0.677901	0.000268	0.0620	-1.973906
1.98	-0.0059	0.0077	2.8719	0.0651	0.1666	0.186951	0.478379	0.000276	0.0277	-2.94522
1.99	-0.0075	0.0049	1.8233	0.0655	0.0835	0.119396	0.152153	0.000281	0.0070	-3.722271
2	-0.0016	0.0057	2.1229	0.0656	0.0000	0.139291	-2.37E-14	0.000282	0.0000	-0.808329
2.01	-0.0040	0.0041	1.5237	0.0655	-0.0835	0.099776	-0.127151	0.000281	0.0070	-1.973906
2.02	-0.0055	0.0053	1.9731	0.0651	-0.1666	0.128441	-0.328659	0.000276	0.0277	-2.750957
2.03	-0.0063	0.0073	2.7221	0.0645	-0.2490	0.175444	-0.677901	0.000268	0.0620	-3.139482
2.04	-0.0071	0.0069	2.5723	0.0636	-0.3305	0.163476	-0.850187	0.000257	0.1092	-3.528008
2.05	-0.0036	0.0041	1.5237	0.0624	-0.4107	0.095081	-0.625759	0.000243	0.1687	-1.779643
2.06	-0.0059	0.0073	2.7221	0.0610	-0.4893	0.166065	-1.331786	0.000227	0.2394	-2.94522
2.07	-0.0055	0.0085	3.1715	0.0594	-0.5659	0.188291	-1.794679	0.000209	0.3202	-2.750957

2.08	-0.0032	0.0069	2.5723	0.0575	-0.6403	0.147902	-1.646954	0.000190	0.4099	-1.58538
2.09	-0.0063	0.0073	2.7221	0.0554	-0.7121	0.150804	-1.938493	0.000170	0.5071	-3.139482
2.1	-0.0044	0.0061	2.2727	0.0531	-0.7812	0.120641	-1.775391	0.000150	0.6103	-2.168169
2.11	-0.0075	0.0053	1.9731	0.0506	-0.8472	0.099752	-1.671507	0.000129	0.7177	-3.722271
2.12	-0.0020	0.0073	2.7221	0.0478	-0.9098	0.130199	-2.476527	0.000109	0.8277	-1.002592
2.13	-0.0067	0.0061	2.2727	0.0449	-0.9688	0.10208	-2.201831	0.000091	0.9386	-3.333745
2.14	-0.0044	0.0069	2.5723	0.0418	-1.0240	0.107583	-2.634127	0.000073	1.0487	-2.168169
2.15	-0.0051	0.0069	2.5723	0.0386	-1.0752	0.099206	-2.765758	0.000057	1.1561	-2.556694
2.16	-0.0044	0.0073	2.7221	0.0352	-1.1221	0.095703	-3.054576	0.000043	1.2592	-2.168169
2.17	-0.0067	0.0061	2.2727	0.0316	-1.1646	0.071839	-2.646862	0.000032	1.3564	-3.333745
2.18	-0.0059	0.0065	2.4225	0.0279	-1.2026	0.067677	-2.913154	0.000022	1.4461	-2.94522
2.19	-0.0044	0.0073	2.7221	0.0242	-1.2357	0.06575	-3.363708	0.000014	1.5270	-2.168169
2.2	-0.0036	0.0065	2.4225	0.0203	-1.2640	0.049118	-3.061993	0.000008	1.5977	-1.779643
2.21	-0.0048	0.0041	1.5237	0.0163	-1.2873	0.024862	-1.961381	0.000004	1.6571	-2.362431
2.22	-0.0048	0.0057	2.1229	0.0123	-1.3055	0.0261	-2.771406	0.000002	1.7043	-2.362431
2.23	-0.0067	0.0061	2.2727	0.0082	-1.3186	0.01869	-2.996658	0.000001	1.7386	-3.333745
2.24	-0.0071	0.0073	2.7221	0.0041	-1.3264	0.011215	-3.610621	0.000000	1.7594	-3.528008
2.25	-0.0075	0.0077	2.8719	0.0000	-1.3290	4.79E-15	-3.816855	0.000000	1.7664	-3.722271
2.26	-0.0044	0.0073	2.7221	-0.0041	-1.3264	-0.011215	-3.610621	0.000000	1.7594	-2.168169
2.27	-0.0087	0.0065	2.4225	-0.0082	-1.3186	-0.019922	-3.194183	-0.000001	1.7386	-4.305059
2.28	-0.0059	0.0061	2.2727	-0.0123	-1.3055	-0.027942	-2.966974	-0.000002	1.7043	-2.94522
2.29	-0.0020	0.0065	2.4225	-0.0163	-1.2873	-0.039529	-3.118421	-0.000004	1.6571	-1.002592
2.3	-0.0055	0.0077	2.8719	-0.0203	-1.2640	-0.05823	-3.630045	-0.000008	1.5977	-2.750957
2.31	-0.0051	0.0073	2.7221	-0.0242	-1.2357	-0.06575	-3.363708	-0.000014	1.5270	-2.556694
2.32	-0.0032	0.0049	1.8233	-0.0279	-1.2026	-0.050937	-2.192568	-0.000022	1.4461	-1.58538
2.33	-0.0071	0.0061	2.2727	-0.0316	-1.1646	-0.071839	-2.646862	-0.000032	1.3564	-3.528008
2.34	-0.0048	0.0069	2.5723	-0.0352	-1.1221	-0.090436	-2.886474	-0.000043	1.2592	-2.362431
2.35	-0.0028	0.0073	2.7221	-0.0386	-1.0752	-0.104983	-2.926829	-0.000057	1.1561	-1.391118
2.36	-0.0079	0.0049	1.8233	-0.0418	-1.0240	-0.076256	-1.8671	-0.000073	1.0487	-3.916533
2.37	-0.0032	0.0057	2.1229	-0.0449	-0.9688	-0.095351	-2.056698	-0.000091	0.9386	-1.58538
2.38	-0.0040	0.0065	2.4225	-0.0478	-0.9098	-0.115869	-2.203947	-0.000109	0.8277	-1.973906
2.39	-0.0063	0.0065	2.4225	-0.0506	-0.8472	-0.122472	-2.052231	-0.000129	0.7177	-3.139482
2.4	-0.0044	0.0057	2.1229	-0.0531	-0.7812	-0.112689	-1.658366	-0.000150	0.6103	-2.168169
2.41	-0.0028	0.0069	2.5723	-0.0554	-0.7121	-0.142504	-1.831812	-0.000170	0.5071	-1.391118
2.42	-0.0044	0.0077	2.8719	-0.0575	-0.6403	-0.165129	-1.838784	-0.000190	0.4099	-2.168169
2.43	-0.0063	0.0053	1.9731	-0.0594	-0.5659	-0.11714	-1.116515	-0.000209	0.3202	-3.139482
2.44	-0.0036	0.0057	2.1229	-0.0610	-0.4893	-0.129509	-1.038619	-0.000227	0.2394	-1.779643
2.45	-0.0036	0.0065	2.4225	-0.0624	-0.4107	-0.15117	-0.994902	-0.000243	0.1687	-1.779643
2.46	-0.0036	0.0053	1.9731	-0.0636	-0.3305	-0.125394	-0.652136	-0.000257	0.1092	-1.779643
2.47	-0.0036	0.0057	2.1229	-0.0645	-0.2490	-0.136824	-0.528674	-0.000268	0.0620	-1.779643
2.48	-0.0032	0.0053	1.9731	-0.0651	-0.1666	-0.128441	-0.328659	-0.000276	0.0277	-1.58538
2.49	-0.0028	0.0069	2.5723	-0.0655	-0.0835	-0.168445	-0.21466	-0.000281	0.0070	-1.391118
2.5	-0.0059	0.0073	2.7221	-0.0656	0.0000	-0.178608	-2.14E-13	-0.000282	0.0000	-2.94522
2.51	-0.0036	0.0061	2.2727	-0.0655	0.0835	-0.148826	0.189657	-0.000281	0.0070	-1.779643
2.52	-0.0020	0.0081	3.0217	-0.0651	0.1666	-0.196703	0.503332	-0.000276	0.0277	-1.002592
2.53	-0.0032	0.0041	1.5237	-0.0645	0.2490	-0.098203	0.379447	-0.000268	0.0620	-1.58538
2.54	-0.0024	0.0081	3.0217	-0.0636	0.3305	-0.192037	0.998726	-0.000257	0.1092	-1.196855
2.55	-0.0044	0.0069	2.5723	-0.0624	0.4107	-0.160518	1.056426	-0.000243	0.1687	-2.168169
2.56	-0.0020	0.0061	2.2727	-0.0610	0.4893	-0.138648	1.111911	-0.000227	0.2394	-1.002592
2.57	-0.0051	0.0057	2.1229	-0.0594	0.5659	-0.126034	1.201285	-0.000209	0.3202	-2.556694
2.58	-0.0063	0.0069	2.5723	-0.0575	0.6403	-0.147902	1.646954	-0.000190	0.4099	-3.139482
2.59	-0.0044	0.0073	2.7221	-0.0554	0.7121	-0.150804	1.938493	-0.000170	0.5071	-2.168169
2.6	-0.0024	0.0053	1.9731	-0.0531	0.7812	-0.104737	1.54134	-0.000150	0.6103	-1.196855
2.61	-0.0012	0.0069	2.5723	-0.0506	0.8472	-0.130046	2.179139	-0.000129	0.7177	-0.614067
2.62	-0.0051	0.0061	2.2727	-0.0478	0.9098	-0.108704	2.067657	-0.000109	0.8277	-2.556694
2.63	-0.0036	0.0065	2.4225	-0.0449	0.9688	-0.108808	2.346966	-0.000091	0.9386	-1.779643
2.64	-0.0044	0.0073	2.7221	-0.0418	1.0240	-0.113849	2.787532	-0.000073	1.0487	-2.168169
2.65	-0.0024	0.0069	2.5723	-0.0386	1.0752	-0.099206	2.765758	-0.000057	1.1561	-1.196855
2.66	-0.0071	0.0077	2.8719	-0.0352	1.1221	-0.10097	3.222677	-0.000043	1.2592	-3.528008
2.67	-0.0083	0.0057	2.1229	-0.0316	1.1646	-0.067104	2.472394	-0.000032	1.3564	-4.110796
2.68	-0.0040	0.0065	2.4225	-0.0279	1.2026	-0.067677	2.913154	-0.000022	1.4461	-1.973906
2.69	-0.0051	0.0073	2.7221	-0.0242	1.2357	-0.06575	3.363708	-0.000014	1.5270	-2.556694
2.7	-0.0083	0.0073	2.7221	-0.0203	1.2640	-0.055193	3.440694	-0.000008	1.5977	-4.110796
2.71	-0.0024	0.0069	2.5723	-0.0163	1.2873	-0.041974	3.311261	-0.000004	1.6571	-1.196855
2.72	-0.0055	0.0065	2.4225	-0.0123	1.3055	-0.029784	3.162543	-0.000002	1.7043	-2.750957
2.73	-0.0024	0.0073	2.7221	-0.0082	1.3186	-0.022385	3.589233	-0.000001	1.7386	-1.196855
2.74	-0.0048	0.0057	2.1229	-0.0041	1.3264	-0.008746	2.815813	0.000000	1.7594	-2.362431
2.75	-0.0059	0.0065	2.4225	0.0000	1.3290	-1.45E-14	3.21957	0.000000	1.7664	-2.94522
2.76	-0.0016	0.0097	3.6209	0.0041	1.3264	0.014918	4.802835	0.000000	1.7594	-0.808329
2.77	-0.0063	0.0069	2.5723	0.0082	1.3186	0.021154	3.391708	0.000001	1.7386	-3.139482
2.78	-0.0059	0.0065	2.4225	0.0123	1.3055	0.029784	3.162543	0.000002	1.7043	-2.94522

2.79	-0.0051	0.0073	2.7221	0.0163	1.2873	0.044418	3.504102	0.000004	1.6571	-2.556694
2.8	-0.0024	0.0045	1.6735	0.0203	1.2640	0.033931	2.11524	0.000008	1.5977	-1.196855
2.81	-0.0040	0.0057	2.1229	0.0242	1.2357	0.051276	2.623253	0.000014	1.5270	-1.973906
2.82	-0.0059	0.0081	3.0217	0.0279	1.2026	0.084418	3.63374	0.000022	1.4461	-2.94522
2.83	-0.0075	0.0065	2.4225	0.0316	1.1646	0.076574	2.821331	0.000032	1.3564	-3.722271
2.84	-0.0005	0.0057	2.1229	0.0352	1.1221	0.074636	2.38217	0.000043	1.2592	-0.225541
2.85	-0.0024	0.0073	2.7221	0.0386	1.0752	0.104983	2.926829	0.000057	1.1561	-1.196855
2.86	-0.0024	0.0061	2.2727	0.0418	1.0240	0.095053	2.327316	0.000073	1.0487	-1.196855
2.87	-0.0040	0.0065	2.4225	0.0449	0.9688	0.108808	2.346966	0.000091	0.9386	-1.973906
2.88	-0.0059	0.0073	2.7221	0.0478	0.9098	0.130199	2.476527	0.000109	0.8277	-2.94522
2.89	-0.0075	0.0069	2.5723	0.0506	0.8472	0.130046	2.179139	0.000129	0.7177	-3.722271
2.9	-0.0024	0.0057	2.1229	0.0531	0.7812	0.112689	1.658366	0.000150	0.6103	-1.196855
2.91	-0.0044	0.0061	2.2727	0.0554	0.7121	0.125906	1.618451	0.000170	0.5071	-2.168169
2.92	-0.0051	0.0049	1.8233	0.0575	0.6403	0.104834	1.167381	0.000190	0.4099	-2.556694
2.93	-0.0048	0.0073	2.7221	0.0594	0.5659	0.161609	1.540367	0.000209	0.3202	-2.362431
2.94	-0.0040	0.0053	1.9731	0.0610	0.4893	0.12037	0.965328	0.000227	0.2394	-1.973906
2.95	-0.0067	0.0061	2.2727	0.0624	0.4107	0.141822	0.933378	0.000243	0.1687	-3.333745
2.96	-0.0044	0.0061	2.2727	0.0636	0.3305	0.144435	0.751162	0.000257	0.1092	-2.168169
2.97	-0.0032	0.0061	2.2727	0.0645	0.2490	0.146479	0.565981	0.000268	0.0620	-1.58538
2.98	-0.0048	0.0081	3.0217	0.0651	0.1666	0.196703	0.503332	0.000276	0.0277	-2.362431
2.99	-0.0071	0.0073	2.7221	0.0655	0.0835	0.178255	0.227161	0.000281	0.0070	-3.528008
3	-0.0063	0.0053	1.9731	0.0656	0.0000	0.129461	3.28E-13	0.000282	0.0000	-3.139482
3.01	-0.0059	0.0073	2.7221	0.0655	-0.0835	0.178255	-0.227161	0.000281	0.0070	-2.94522
3.02	-0.0028	0.0049	1.8233	0.0651	-0.1666	0.118689	-0.303706	0.000276	0.0277	-1.391118
3.03	-0.0063	0.0073	2.7221	0.0645	-0.2490	0.175444	-0.677901	0.000268	0.0620	-3.139482
3.04	-0.0020	0.0069	2.5723	0.0636	-0.3305	0.163476	-0.850187	0.000257	0.1092	-1.002592
3.05	-0.0051	0.0061	2.2727	0.0624	-0.4107	0.141822	-0.933378	0.000243	0.1687	-2.556694
3.06	-0.0044	0.0077	2.8719	0.0610	-0.4893	0.175204	-1.405078	0.000227	0.2394	-2.168169
3.07	-0.0051	0.0057	2.1229	0.0594	-0.5659	0.126034	-1.201285	0.000209	0.3202	-2.556694
3.08	-0.0005	0.0053	1.9731	0.0575	-0.6403	0.113448	-1.263295	0.000190	0.4099	-0.225541
3.09	-0.0032	0.0061	2.2727	0.0554	-0.7121	0.125906	-1.618451	0.000170	0.5071	-1.58538
3.1	-0.0067	0.0057	2.1229	0.0531	-0.7812	0.112689	-1.658366	0.000150	0.6103	-3.333745
3.11	-0.0051	0.0097	3.6209	0.0506	-0.8472	0.183061	-3.067495	0.000129	0.7177	-2.556694
3.12	-0.0075	0.0069	2.5723	0.0478	-0.9098	0.123034	-2.340237	0.000109	0.8277	-3.722271
3.13	-0.0016	0.0065	2.4225	0.0449	-0.9688	0.108808	-2.346966	0.000091	0.9386	-0.808329
3.14	-0.0059	0.0069	2.5723	0.0418	-1.0240	0.107583	-2.634127	0.000073	1.0487	-2.94522
3.15	-0.0024	0.0065	2.4225	0.0386	-1.0752	0.093428	-2.604687	0.000057	1.1561	-1.196855
3.16	-0.0071	0.0061	2.2727	0.0352	-1.1221	0.079902	-2.550271	0.000043	1.2592	-3.528008
3.17	-0.0024	0.0077	2.8719	0.0316	-1.1646	0.09078	-3.344736	0.000032	1.3564	-1.196855
3.18	-0.0048	0.0057	2.1229	0.0279	-1.2026	0.059307	-2.552861	0.000022	1.4461	-2.362431
3.19	-0.0032	0.0057	2.1229	0.0242	-1.2357	0.051276	-2.623253	0.000014	1.5270	-1.58538
3.2	-0.0020	0.0073	2.7221	0.0203	-1.2640	0.055193	-3.440694	0.000008	1.5977	-1.002592
3.21	-0.0024	0.0085	3.1715	0.0163	-1.2873	0.051751	-4.082622	0.000004	1.6571	-1.196855
3.22	-0.0032	0.0089	3.3213	0.0123	-1.3055	0.040835	-4.335954	0.000002	1.7043	-1.58538
3.23	-0.0059	0.0073	2.7221	0.0082	-1.3186	0.022385	-3.589233	0.000001	1.7386	-2.94522
3.24	-0.0044	0.0081	3.0217	0.0041	-1.3264	0.012449	-4.008026	0.000000	1.7594	-2.168169
3.25	-0.0055	0.0073	2.7221	0.0000	-1.3290	2.84E-14	-3.61776	0.000000	1.7664	-2.750957
3.26	-0.0040	0.0061	2.2727	-0.0041	-1.3264	-0.009363	-3.014515	0.000000	1.7594	-1.973906
3.27	-0.0040	0.0081	3.0217	-0.0082	-1.3186	-0.024849	-3.984283	-0.000001	1.7386	-1.973906
3.28	-0.0063	0.0057	2.1229	-0.0123	-1.3055	-0.0261	-2.771406	-0.000002	1.7043	-3.139482
3.29	-0.0044	0.0077	2.8719	-0.0163	-1.2873	-0.046862	-3.696942	-0.000004	1.6571	-2.168169
3.3	-0.0012	0.0065	2.4225	-0.0203	-1.2640	-0.049118	-3.061993	-0.000008	1.5977	-0.614067
3.31	-0.0059	0.0045	1.6735	-0.0242	-1.2357	-0.040421	-2.067911	-0.000014	1.5270	-2.94522
3.32	-0.0036	0.0093	3.4711	-0.0279	-1.2026	-0.096973	-4.17418	-0.000022	1.4461	-1.779643
3.33	-0.0024	0.0073	2.7221	-0.0316	-1.1646	-0.086045	-3.170267	-0.000032	1.3564	-1.196855
3.34	-0.0036	0.0061	2.2727	-0.0352	-1.1221	-0.079902	-2.550271	-0.000043	1.2592	-1.779643
3.35	-0.0032	0.0085	3.1715	-0.0386	-1.0752	-0.122316	-3.410043	-0.000057	1.1561	-1.58538
3.36	-0.0063	0.0081	3.0217	-0.0418	-1.0240	-0.12638	-3.094343	-0.000073	1.0487	-3.139482
3.37	-0.0028	0.0061	2.2727	-0.0449	-0.9688	-0.10208	-2.201831	-0.000091	0.9386	-1.391118
3.38	-0.0024	0.0069	2.5723	-0.0478	-0.9098	-0.123034	-2.340237	-0.000109	0.8277	-1.196855
3.39	-0.0071	0.0069	2.5723	-0.0506	-0.8472	-0.130046	-2.179139	-0.000129	0.7177	-3.528008
3.4	-0.0024	0.0061	2.2727	-0.0531	-0.7812	-0.120641	-1.775391	-0.000150	0.6103	-1.196855
3.41	-0.0036	0.0053	1.9731	-0.0554	-0.7121	-0.109308	-1.405091	-0.000170	0.5071	-1.779643
3.42	-0.0020	0.0061	2.2727	-0.0575	-0.6403	-0.130675	-1.455125	-0.000190	0.4099	-1.002592
3.43	-0.0051	0.0089	3.3213	-0.0594	-0.5659	-0.197184	-1.87945	-0.000209	0.3202	-2.556694
3.44	-0.0071	0.0045	1.6735	-0.0610	-0.4893	-0.102092	-0.818744	-0.000227	0.2394	-3.528008
3.45	-0.0012	0.0073	2.7221	-0.0624	-0.4107	-0.169866	-1.117949	-0.000243	0.1687	-0.614067
3.46	-0.0020	0.0085	3.1715	-0.0636	-0.3305	-0.201558	-1.048239	-0.000257	0.1092	-1.002592
3.47	-0.0040	0.0065	2.4225	-0.0645	-0.2490	-0.156134	-0.603287	-0.000268	0.0620	-1.973906
3.48	-0.0051	0.0073	2.7221	-0.0651	-0.1666	-0.177199	-0.453426	-0.000276	0.0277	-2.556694
3.49	-0.0032	0.0065	2.4225	-0.0655	-0.0835	-0.158636	-0.202158	-0.000281	0.0070	-1.58538

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3.5	-0.0051	0.0041	1.5237	-0.0656	0.0000	-0.099974	-3.9E-13	-0.000282	0.0000	-2.556694
3.51	-0.0028	0.0053	1.9731	-0.0655	0.0835	-0.129206	0.164655	-0.000281	0.0070	-1.391118
3.52	-0.0032	0.0057	2.1229	-0.0651	0.1666	-0.138192	0.353613	-0.000276	0.0277	-1.58538
3.53	-0.0044	0.0073	2.7221	-0.0645	0.2490	-0.175444	0.677901	-0.000268	0.0620	-2.168169
3.54	-0.0012	0.0057	2.1229	-0.0636	0.3305	-0.134915	0.701649	-0.000257	0.1092	-0.614067
3.55	-0.0032	0.0061	2.2727	-0.0624	0.4107	-0.141822	0.933378	-0.000243	0.1687	-1.58538
3.56	-0.0051	0.0069	2.5723	-0.0610	0.4893	-0.156926	1.258495	-0.000227	0.2394	-2.556694
3.57	-0.0032	0.0081	3.0217	-0.0594	0.5659	-0.179397	1.709908	-0.000209	0.3202	-1.58538
3.58	-0.0063	0.0057	2.1229	-0.0575	0.6403	-0.122061	1.35921	-0.000190	0.4099	-3.139482
3.59	-0.0048	0.0057	2.1229	-0.0554	0.7121	-0.117607	1.511771	-0.000170	0.5071	-2.362431
3.6	-0.0016	0.0069	2.5723	-0.0531	0.7812	-0.136545	2.009441	-0.000150	0.6103	-0.808329
3.61	-0.0036	0.0073	2.7221	-0.0506	0.8472	-0.13762	2.306047	-0.000129	0.7177	-1.779643
3.62	-0.0055	0.0049	1.8233	-0.0478	0.9098	-0.087208	1.658788	-0.000109	0.8277	-2.750957
3.63	-0.0051	0.0077	2.8719	-0.0449	0.9688	-0.128994	2.782368	-0.000091	0.9386	-2.556694
3.64	-0.0059	0.0073	2.7221	-0.0418	1.0240	-0.113849	2.787532	-0.000073	1.0487	-2.94522
3.65	-0.0036	0.0049	1.8233	-0.0386	1.0752	-0.070318	1.960402	-0.000057	1.1561	-1.779643
3.66	-0.0036	0.0093	3.4711	-0.0352	1.1221	-0.122037	3.895084	-0.000043	1.2592	-1.779643
3.67	-0.0008	0.0069	2.5723	-0.0316	1.1646	-0.08131	2.995799	-0.000032	1.3564	-0.419804
3.68	-0.0071	0.0065	2.4225	-0.0279	1.2026	-0.067677	2.913154	-0.000022	1.4461	-3.528008
3.69	-0.0055	0.0077	2.8719	-0.0242	1.2357	-0.069368	3.548822	-0.000014	1.5270	-2.750957
3.7	-0.0040	0.0081	3.0217	-0.0203	1.2640	-0.061268	3.819396	-0.000008	1.5977	-1.973906
3.71	-0.0012	0.0069	2.5723	-0.0163	1.2873	-0.041974	3.311261	-0.000004	1.6571	-0.614067
3.72	-0.0024	0.0085	3.1715	-0.0123	1.3055	-0.038993	4.140385	-0.000002	1.7043	-1.196855
3.73	-0.0063	0.0049	1.8233	-0.0082	1.3186	-0.014994	2.404082	-0.000001	1.7386	-3.139482
3.74	-0.0036	0.0053	1.9731	-0.0041	1.3264	-0.008129	2.617111	0.000000	1.7594	-1.779643
3.75	-0.0040	0.0057	2.1229	0.0000	1.3290	-3.16E-14	2.82138	0.000000	1.7664	-1.973906
3.76	-0.0020	0.0081	3.0217	0.0041	1.3264	0.012449	4.008026	0.000000	1.7594	-1.002592
3.77	-0.0044	0.0057	2.1229	0.0082	1.3186	0.017458	2.799133	0.000001	1.7386	-2.168169
3.78	-0.0094	0.0057	2.1229	0.0123	1.3055	0.0261	2.771406	0.000002	1.7043	-4.693584
3.79	-0.0016	0.0077	2.8719	0.0163	1.2873	0.046862	3.696942	0.000004	1.6571	-0.808329
3.8	-0.0024	0.0073	2.7221	0.0203	1.2640	0.055193	3.440694	0.000008	1.5977	-1.196855
3.81	-0.0005	0.0061	2.2727	0.0242	1.2357	0.054895	2.808367	0.000014	1.5270	-0.225541
3.82	-0.0075	0.0065	2.4225	0.0279	1.2026	0.067677	2.913154	0.000022	1.4461	-3.722271
3.83	-0.0051	0.0081	3.0217	0.0316	1.1646	0.095516	3.519204	0.000032	1.3564	-2.556694
3.84	-0.0024	0.0073	2.7221	0.0352	1.1221	0.095703	3.054576	0.000043	1.2592	-1.196855
3.85	-0.0044	0.0057	2.1229	0.0386	1.0752	0.081873	2.282544	0.000057	1.1561	-2.168169
3.86	-0.0040	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-1.973906
3.87	-0.0036	0.0085	3.1715	0.0449	0.9688	0.142451	3.072636	0.000091	0.9386	-1.779643
3.88	-0.0032	0.0057	2.1229	0.0478	0.9098	0.101539	1.931368	0.000109	0.8277	-1.58538
3.89	-0.0036	0.0073	2.7221	0.0506	0.8472	0.13762	2.306047	0.000129	0.7177	-1.779643
3.9	-0.0020	0.0065	2.4225	0.0531	0.7812	0.128593	1.892416	0.000150	0.6103	-1.002592
3.91	-0.0071	0.0041	1.5237	0.0554	0.7121	0.084411	1.085049	0.000170	0.5071	-3.528008
3.92	-0.0067	0.0081	3.0217	0.0575	0.6403	0.173742	1.934699	0.000190	0.4099	-3.333745
3.93	-0.0051	0.0069	2.5723	0.0594	0.5659	0.152715	1.455597	0.000209	0.3202	-2.556694
3.94	-0.0059	0.0081	3.0217	0.0610	0.4893	0.184343	1.47837	0.000227	0.2394	-2.94522
3.95	-0.0059	0.0069	2.5723	0.0624	0.4107	0.160518	1.056426	0.000243	0.1687	-2.94522
3.96	-0.0048	0.0057	2.1229	0.0636	0.3305	0.134915	0.701649	0.000257	0.1092	-2.362431
3.97	-0.0040	0.0057	2.1229	0.0645	0.2490	0.136824	0.528674	0.000268	0.0620	-1.973906
3.98	-0.0040	0.0073	2.7221	0.0651	0.1666	0.177199	0.453426	0.000276	0.0277	-1.973906
3.99	-0.0059	0.0077	2.8719	0.0655	0.0835	0.188065	0.239662	0.000281	0.0070	-2.94522
4	-0.0036	0.0069	2.5723	0.0656	0.0000	0.168779	8.9E-13	0.000282	0.0000	-1.779643
4.01	-0.0044	0.0085	3.1715	0.0655	-0.0835	0.207685	-0.264665	0.000281	0.0070	-2.168169
4.02	-0.0071	0.0061	2.2727	0.0651	-0.1666	0.147944	-0.378566	0.000276	0.0277	-3.528008
4.03	-0.0005	0.0049	1.8233	0.0645	-0.2490	0.117513	-0.454061	0.000268	0.0620	-0.225541
4.04	-0.0063	0.0081	3.0217	0.0636	-0.3305	0.192037	-0.998726	0.000257	0.1092	-3.139482
4.05	-0.0040	0.0061	2.2727	0.0624	-0.4107	0.141822	-0.933378	0.000243	0.1687	-1.973906
4.06	-0.0063	0.0077	2.8719	0.0610	-0.4893	0.175204	-1.405078	0.000227	0.2394	-3.139482
4.07	-0.0048	0.0073	2.7221	0.0594	-0.5659	0.161609	-1.540367	0.000209	0.3202	-2.362431
4.08	-0.0059	0.0069	2.5723	0.0575	-0.6403	0.147902	-1.646954	0.000190	0.4099	-2.94522
4.09	-0.0048	0.0057	2.1229	0.0554	-0.7121	0.117607	-1.511771	0.000170	0.5071	-2.362431
4.1	-0.0032	0.0089	3.3213	0.0531	-0.7812	0.176305	-2.594567	0.000150	0.6103	-1.58538
4.11	-0.0028	0.0053	1.9731	0.0506	-0.8472	0.099752	-1.671507	0.000129	0.7177	-1.391118
4.12	-0.0036	0.0053	1.9731	0.0478	-0.9098	0.094373	-1.795078	0.000109	0.8277	-1.779643
4.13	-0.0048	0.0053	1.9731	0.0449	-0.9688	0.088622	-1.911564	0.000091	0.9386	-2.362431
4.14	-0.0048	0.0061	2.2727	0.0418	-1.0240	0.095053	-2.327316	0.000073	1.0487	-2.362431
4.15	-0.0028	0.0053	1.9731	0.0386	-1.0752	0.076096	-2.121473	0.000057	1.1561	-1.391118
4.16	-0.0020	0.0045	1.6735	0.0352	-1.1221	0.058835	-1.877865	0.000043	1.2592	-1.002592
4.17	-0.0024	0.0061	2.2727	0.0316	-1.1646	0.071839	-2.646862	0.000032	1.3564	-1.196855
4.18	-0.0044	0.0069	2.5723	0.0279	-1.2026	0.071862	-3.093301	0.000022	1.4461	-2.168169
4.19	-0.0063	0.0065	2.4225	0.0242	-1.2357	0.058513	-2.99348	0.000014	1.5270	-3.139482
4.2	-0.0075	0.0045	1.6735	0.0203	-1.2640	0.033931	-2.11524	0.000008	1.5977	-3.722271

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4.21	-0.0036	0.0045	1.6735	0.0163	-1.2873	0.027307	-2.154221	0.000004	1.6571	-1.779643
4.22	-0.0020	0.0065	2.4225	0.0123	-1.3055	0.029784	-3.162543	0.000002	1.7043	-1.002592
4.23	-0.0059	0.0057	2.1229	0.0082	-1.3186	0.017458	-2.799133	0.000001	1.7386	-2.94522
4.24	-0.0075	0.0065	2.4225	0.0041	-1.3264	0.009981	-3.213217	0.000000	1.7594	-3.722271
4.25	-0.0040	0.0069	2.5723	0.0000	-1.3290	4.9E-14	-3.418665	0.000000	1.7664	-1.973906
4.26	-0.0040	0.0061	2.2727	-0.0041	-1.3264	-0.009363	-3.014515	0.000000	1.7594	-1.973906
4.27	-0.0051	0.0073	2.7221	-0.0082	-1.3186	-0.022385	-3.589233	-0.000001	1.7386	-2.556694
4.28	-0.0040	0.0061	2.2727	-0.0123	-1.3055	-0.027942	-2.966974	-0.000002	1.7043	-1.973906
4.29	-0.0063	0.0069	2.5723	-0.0163	-1.2873	-0.041974	-3.311261	-0.000004	1.6571	-3.139482
4.3	-0.0051	0.0073	2.7221	-0.0203	-1.2640	-0.055193	-3.440694	-0.000008	1.5977	-2.556694
4.31	-0.0079	0.0069	2.5723	-0.0242	-1.2357	-0.062132	-3.178594	-0.000014	1.5270	-3.916533
4.32	-0.0055	0.0045	1.6735	-0.0279	-1.2026	-0.046752	-2.012421	-0.000022	1.4461	-2.750957
4.33	-0.0059	0.0061	2.2727	-0.0316	-1.1646	-0.071839	-2.646862	-0.000032	1.3564	-2.94522
4.34	-0.0028	0.0053	1.9731	-0.0352	-1.1221	-0.069369	-2.214068	-0.000043	1.2592	-1.391118
4.35	-0.0044	0.0065	2.4225	-0.0386	-1.0752	-0.093428	-2.604687	-0.000057	1.1561	-2.168169
4.36	-0.0032	0.0061	2.2727	-0.0418	-1.0240	-0.095053	-2.327316	-0.000073	1.0487	-1.58538
4.37	-0.0075	0.0049	1.8233	-0.0449	-0.9688	-0.081894	-1.766429	-0.000091	0.9386	-3.722271
4.38	-0.0055	0.0089	3.3213	-0.0478	-0.9098	-0.15886	-3.021687	-0.000109	0.8277	-2.750957
4.39	-0.0051	0.0069	2.5723	-0.0506	-0.8472	-0.130046	-2.179139	-0.000129	0.7177	-2.556694
4.4	-0.0059	0.0061	2.2727	-0.0531	-0.7812	-0.120641	-1.775391	-0.000150	0.6103	-2.94522
4.41	-0.0063	0.0061	2.2727	-0.0554	-0.7121	-0.125906	-1.618451	-0.000170	0.5071	-3.139482
4.42	-0.0012	0.0065	2.4225	-0.0575	-0.6403	-0.139288	-1.55104	-0.000190	0.4099	-0.614067
4.43	-0.0048	0.0073	2.7221	-0.0594	-0.5659	-0.161609	-1.540367	-0.000209	0.3202	-2.362431
4.44	-0.0036	0.0069	2.5723	-0.0610	-0.4893	-0.156926	-1.258495	-0.000227	0.2394	-1.779643
4.45	-0.0040	0.0077	2.8719	-0.0624	-0.4107	-0.179214	-1.179473	-0.000243	0.1687	-1.973906
4.46	-0.0055	0.0081	3.0217	-0.0636	-0.3305	-0.192037	-0.998726	-0.000257	0.1092	-2.750957
4.47	-0.0051	0.0069	2.5723	-0.0645	-0.2490	-0.165789	-0.640594	-0.000268	0.0620	-2.556694
4.48	-0.0063	0.0073	2.7221	-0.0651	-0.1666	-0.177199	-0.453426	-0.000276	0.0277	-3.139482
4.49	-0.0040	0.0073	2.7221	-0.0655	-0.0835	-0.178255	-0.227161	-0.000281	0.0070	-1.973906
4.5	-0.0024	0.0045	1.6735	-0.0656	0.0000	-0.109803	-7.21E-13	-0.000282	0.0000	-1.196855
4.51	-0.0051	0.0065	2.4225	-0.0655	0.0835	-0.158636	0.202158	-0.000281	0.0070	-2.556694
4.52	-0.0024	0.0053	1.9731	-0.0651	0.1666	-0.128441	0.328659	-0.000276	0.0277	-1.196855
4.53	-0.0028	0.0065	2.4225	-0.0645	0.2490	-0.156134	0.603287	-0.000268	0.0620	-1.391118
4.54	-0.0044	0.0057	2.1229	-0.0636	0.3305	-0.134915	0.701649	-0.000257	0.1092	-2.168169
4.55	-0.0040	0.0065	2.4225	-0.0624	0.4107	-0.15117	0.994902	-0.000243	0.1687	-1.973906
4.56	-0.0051	0.0049	1.8233	-0.0610	0.4893	-0.111231	0.892036	-0.000227	0.2394	-2.556694
4.57	-0.0016	0.0057	2.1229	-0.0594	0.5659	-0.126034	1.201285	-0.000209	0.3202	-0.808329
4.58	-0.0001	0.0045	1.6735	-0.0575	0.6403	-0.096221	1.071466	-0.000190	0.4099	-0.031278
4.59	-0.0040	0.0073	2.7221	-0.0554	0.7121	-0.150804	1.938493	-0.000170	0.5071	-1.973906
4.6	-0.0044	0.0057	2.1229	-0.0531	0.7812	-0.112689	1.658366	-0.000150	0.6103	-2.168169
4.61	-0.0044	0.0045	1.6735	-0.0506	0.8472	-0.084605	1.417691	-0.000129	0.7177	-2.168169
4.62	-0.0044	0.0053	1.9731	-0.0478	0.9098	-0.094373	1.795078	-0.000109	0.8277	-2.168169
4.63	-0.0036	0.0069	2.5723	-0.0449	0.9688	-0.115537	2.4921	-0.000091	0.9386	-1.779643
4.64	-0.0048	0.0057	2.1229	-0.0418	1.0240	-0.088787	2.173911	-0.000073	1.0487	-2.362431
4.65	-0.0040	0.0057	2.1229	-0.0386	1.0752	-0.081873	2.282544	-0.000057	1.1561	-1.973906
4.66	-0.0059	0.0057	2.1229	-0.0352	1.1221	-0.074636	2.38217	-0.000043	1.2592	-2.94522
4.67	-0.0094	0.0061	2.2727	-0.0316	1.1646	-0.071839	2.646862	-0.000032	1.3564	-4.693584
4.68	-0.0032	0.0069	2.5723	-0.0279	1.2026	-0.071862	3.093301	-0.000022	1.4461	-1.58538
4.69	-0.0032	0.0077	2.8719	-0.0242	1.2357	-0.069368	3.548822	-0.000014	1.5270	-1.58538
4.7	-0.0044	0.0057	2.1229	-0.0203	1.2640	-0.043043	2.683292	-0.000008	1.5977	-2.168169
4.71	-0.0044	0.0101	3.7707	-0.0163	1.2873	-0.061529	4.853982	-0.000004	1.6571	-2.168169
4.72	-0.0063	0.0077	2.8719	-0.0123	1.3055	-0.03531	3.749248	-0.000002	1.7043	-3.139482
4.73	-0.0048	0.0065	2.4225	-0.0082	1.3186	-0.019922	3.194183	-0.000001	1.7386	-2.362431
4.74	-0.0083	0.0061	2.2727	-0.0041	1.3264	-0.009363	3.014515	0.000000	1.7594	-4.110796
4.75	-0.0044	0.0069	2.5723	0.0000	1.3290	-6.05E-14	3.418665	0.000000	1.7664	-2.168169
4.76	-0.0048	0.0073	2.7221	0.0041	1.3264	0.011215	3.610621	0.000000	1.7594	-2.362431
4.77	-0.0055	0.0057	2.1229	0.0082	1.3186	0.017458	2.799133	0.000001	1.7386	-2.750957
4.78	-0.0075	0.0061	2.2727	0.0123	1.3055	0.027942	2.966974	0.000002	1.7043	-3.722271
4.79	-0.0040	0.0073	2.7221	0.0163	1.2873	0.044418	3.504102	0.000004	1.6571	-1.973906
4.8	-0.0079	0.0069	2.5723	0.0203	1.2640	0.052155	3.251344	0.000008	1.5977	-3.916533
4.81	-0.0032	0.0077	2.8719	0.0242	1.2357	0.069368	3.548822	0.000014	1.5270	-1.58538
4.82	-0.0048	0.0053	1.9731	0.0279	1.2026	0.055122	2.372714	0.000022	1.4461	-2.362431
4.83	-0.0036	0.0057	2.1229	0.0316	1.1646	0.067104	2.472394	0.000032	1.3564	-1.779643
4.84	-0.0048	0.0061	2.2727	0.0352	1.1221	0.079902	2.550271	0.000043	1.2592	-2.362431
4.85	-0.0028	0.0093	3.4711	0.0386	1.0752	0.133871	3.732186	0.000057	1.1561	-1.391118
4.86	-0.0032	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-1.58538
4.87	-0.0012	0.0045	1.6735	0.0449	0.9688	0.075165	1.621295	0.000091	0.9386	-0.614067
4.88	-0.0036	0.0065	2.4225	0.0478	0.9098	0.115869	2.203947	0.000109	0.8277	-1.779643
4.89	0.0003	0.0073	2.7221	0.0506	0.8472	0.13762	2.306047	0.000129	0.7177	0.162984
4.9	-0.0063	0.0081	3.0217	0.0531	0.7812	0.160401	2.360516	0.000150	0.6103	-3.139482
4.91	-0.0036	0.0081	3.0217	0.0554	0.7121	0.167402	2.151854	0.000170	0.5071	-1.779643

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4.92	-0.0036	0.0077	2.8719	0.0575	0.6403	0.165129	1.838784	0.000190	0.4099	-1.779643
4.93	-0.0055	0.0069	2.5723	0.0594	0.5659	0.152715	1.455597	0.000209	0.3202	-2.750957
4.94	-0.0024	0.0061	2.2727	0.0610	0.4893	0.138648	1.111911	0.000227	0.2394	-1.196855
4.95	-0.0044	0.0081	3.0217	0.0624	0.4107	0.188562	1.240997	0.000243	0.1687	-2.168169
4.96	-0.0059	0.0069	2.5723	0.0636	0.3305	0.163476	0.850187	0.000257	0.1092	-2.94522
4.97	-0.0048	0.0073	2.7221	0.0645	0.2490	0.175444	0.677901	0.000268	0.0620	-2.362431
4.98	-0.0036	0.0061	2.2727	0.0651	0.1666	0.147944	0.378566	0.000276	0.0277	-1.779643
4.99	-0.0040	0.0077	2.8719	0.0655	0.0835	0.188065	0.239662	0.000281	0.0070	-1.973906
5	-0.0051	0.0057	2.1229	0.0656	0.0000	0.139291	1.11E-12	0.000282	0.0000	-2.556694
5.01	-0.0048	0.0069	2.5723	0.0655	-0.0835	0.168445	-0.21466	0.000281	0.0070	-2.362431
5.02	-0.0032	0.0057	2.1229	0.0651	-0.1666	0.138192	-0.353613	0.000276	0.0277	-1.58538
5.03	-0.0059	0.0057	2.1229	0.0645	-0.2490	0.136824	-0.528674	0.000268	0.0620	-2.94522
5.04	-0.0036	0.0073	2.7221	0.0636	-0.3305	0.172996	-0.8997	0.000257	0.1092	-1.779643
5.05	-0.0032	0.0057	2.1229	0.0624	-0.4107	0.132473	-0.871854	0.000243	0.1687	-1.58538
5.06	-0.0040	0.0069	2.5723	0.0610	-0.4893	0.156926	-1.258495	0.000227	0.2394	-1.973906
5.07	-0.0024	0.0053	1.9731	0.0594	-0.5659	0.11714	-1.116515	0.000209	0.3202	-1.196855
5.08	-0.0055	0.0061	2.2727	0.0575	-0.6403	0.130675	-1.455125	0.000190	0.4099	-2.750957
5.09	-0.0071	0.0073	2.7221	0.0554	-0.7121	0.150804	-1.938493	0.000170	0.5071	-3.528008
5.1	-0.0051	0.0053	1.9731	0.0531	-0.7812	0.104737	-1.54134	0.000150	0.6103	-2.556694
5.11	-0.0040	0.0057	2.1229	0.0506	-0.8472	0.107325	-1.798415	0.000129	0.7177	-1.973906
5.12	-0.0040	0.0069	2.5723	0.0478	-0.9098	0.123034	-2.340237	0.000109	0.8277	-1.973906
5.13	-0.0024	0.0069	2.5723	0.0449	-0.9688	0.115537	-2.4921	0.000091	0.9386	-1.196855
5.14	-0.0055	0.0049	1.8233	0.0418	-1.0240	0.076256	-1.8671	0.000073	1.0487	-2.750957
5.15	-0.0048	0.0089	3.3213	0.0386	-1.0752	0.128093	-3.571115	0.000057	1.1561	-2.362431
5.16	-0.0020	0.0057	2.1229	0.0352	-1.1221	0.074636	-2.38217	0.000043	1.2592	-1.002592
5.17	-0.0032	0.0081	3.0217	0.0316	-1.1646	0.095516	-3.519204	0.000032	1.3564	-1.58538
5.18	-0.0024	0.0049	1.8233	0.0279	-1.2026	0.050937	-2.192568	0.000022	1.4461	-1.196855
5.19	-0.0036	0.0085	3.1715	0.0242	-1.2357	0.076605	-3.91905	0.000014	1.5270	-1.779643
5.2	-0.0067	0.0049	1.8233	0.0203	-1.2640	0.036968	-2.304591	0.000008	1.5977	-3.333745
5.21	-0.0036	0.0065	2.4225	0.0163	-1.2873	0.039529	-3.118421	0.000004	1.6571	-1.779643
5.22	-0.0028	0.0061	2.2727	0.0123	-1.3055	0.027942	-2.966974	0.000002	1.7043	-1.391118
5.23	-0.0044	0.0077	2.8719	0.0082	-1.3186	0.023617	-3.786758	0.000001	1.7386	-2.168169
5.24	-0.0059	0.0069	2.5723	0.0041	-1.3264	0.010598	-3.411919	0.000000	1.7594	-2.94522
5.25	-0.0051	0.0049	1.8233	0.0000	-1.3290	5.09E-14	-2.42319	0.000000	1.7664	-2.556694
5.26	-0.0032	0.0073	2.7221	-0.0041	-1.3264	-0.011215	-3.610621	0.000000	1.7594	-1.58538
5.27	-0.0028	0.0045	1.6735	-0.0082	-1.3186	-0.013762	-2.206557	-0.000001	1.7386	-1.391118
5.28	-0.0032	0.0065	2.4225	-0.0123	-1.3055	-0.029784	-3.162543	-0.000002	1.7043	-1.58538
5.29	-0.0024	0.0057	2.1229	-0.0163	-1.2873	-0.03464	-2.732741	-0.000004	1.6571	-1.196855
5.3	-0.0067	0.0081	3.0217	-0.0203	-1.2640	-0.061268	-3.819396	-0.000008	1.5977	-3.333745
5.31	-0.0028	0.0065	2.4225	-0.0242	-1.2357	-0.058513	-2.99348	-0.000014	1.5270	-1.391118
5.32	-0.0040	0.0061	2.2727	-0.0279	-1.2026	-0.063492	-2.733007	-0.000022	1.4461	-1.973906
5.33	-0.0020	0.0073	2.7221	-0.0316	-1.1646	-0.086045	-3.170267	-0.000032	1.3564	-1.002592
5.34	-0.0059	0.0057	2.1229	-0.0352	-1.1221	-0.074636	-2.38217	-0.000043	1.2592	-2.94522
5.35	-0.0012	0.0077	2.8719	-0.0386	-1.0752	-0.110761	-3.087901	-0.000057	1.1561	-0.614067
5.36	-0.0020	0.0077	2.8719	-0.0418	-1.0240	-0.120114	-2.940937	-0.000073	1.0487	-1.002592
5.37	-0.0055	0.0081	3.0217	-0.0449	-0.9688	-0.135723	-2.927502	-0.000091	0.9386	-2.750957
5.38	-0.0067	0.0057	2.1229	-0.0478	-0.9098	-0.101539	-1.931368	-0.000109	0.8277	-3.333745
5.39	-0.0055	0.0081	3.0217	-0.0506	-0.8472	-0.152767	-2.559863	-0.000129	0.7177	-2.750957
5.4	-0.0051	0.0065	2.4225	-0.0531	-0.7812	-0.128593	-1.892416	-0.000150	0.6103	-2.556694
5.41	-0.0059	0.0073	2.7221	-0.0554	-0.7121	-0.150804	-1.938493	-0.000170	0.5071	-2.94522
5.42	-0.0008	0.0069	2.5723	-0.0575	-0.6403	-0.147902	-1.646954	-0.000190	0.4099	-0.419804
5.43	-0.0059	0.0073	2.7221	-0.0594	-0.5659	-0.161609	-1.540367	-0.000209	0.3202	-2.94522
5.44	-0.0036	0.0069	2.5723	-0.0610	-0.4893	-0.156926	-1.258495	-0.000227	0.2394	-1.779643
5.45	-0.0040	0.0029	1.0742	-0.0624	-0.4107	-0.067036	-0.441188	-0.000243	0.1687	-1.973906
5.46	-0.0055	0.0081	3.0217	-0.0636	-0.3305	-0.192037	-0.998726	-0.000257	0.1092	-2.750957
5.47	-0.0055	0.0081	3.0217	-0.0645	-0.2490	-0.194754	-0.752514	-0.000268	0.0620	-2.750957
5.48	-0.0051	0.0089	3.3213	-0.0651	-0.1666	-0.216206	-0.553238	-0.000276	0.0277	-2.556694
5.49	-0.0051	0.0065	2.4225	-0.0655	-0.0835	-0.158636	-0.202158	-0.000281	0.0070	-2.556694
5.5	-0.0024	0.0049	1.8233	-0.0656	0.0000	-0.119632	-1.11E-12	-0.000282	0.0000	-1.196855
5.51	-0.0008	0.0085	3.1715	-0.0655	0.0835	-0.207685	0.264665	-0.000281	0.0070	-0.419804
5.52	-0.0032	0.0073	2.7221	-0.0651	0.1666	-0.177199	0.453426	-0.000276	0.0277	-1.58538
5.53	-0.0032	0.0077	2.8719	-0.0645	0.2490	-0.185099	0.715207	-0.000268	0.0620	-1.58538
5.54	-0.0055	0.0105	3.9205	-0.0636	0.3305	-0.24916	1.295804	-0.000257	0.1092	-2.750957
5.55	-0.0044	0.0061	2.2727	-0.0624	0.4107	-0.141822	0.933378	-0.000243	0.1687	-2.168169
5.56	-0.0083	0.0065	2.4225	-0.0610	0.4893	-0.147787	1.185203	-0.000227	0.2394	-4.110796
5.57	-0.0055	0.0073	2.7221	-0.0594	0.5659	-0.161609	1.540367	-0.000209	0.3202	-2.750957
5.58	-0.0048	0.0089	3.3213	-0.0575	0.6403	-0.190969	2.126528	-0.000190	0.4099	-2.362431
5.59	-0.0044	0.0089	3.3213	-0.0554	0.7121	-0.184	2.365215	-0.000170	0.5071	-2.168169
5.6	-0.0075	0.0053	1.9731	-0.0531	0.7812	-0.104737	1.54134	-0.000150	0.6103	-3.722271
5.61	-0.0044	0.0073	2.7221	-0.0506	0.8472	-0.13762	2.306047	-0.000129	0.7177	-2.168169
5.62	-0.0051	0.0089	3.3213	-0.0478	0.9098	-0.15886	3.021687	-0.000109	0.8277	-2.556694

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5.63	-0.0055	0.0073	2.7221	-0.0449	0.9688	-0.122265	2.637234	-0.000091	0.9386	-2.750957
5.64	-0.0055	0.0061	2.2727	-0.0418	1.0240	-0.095053	2.327316	-0.000073	1.0487	-2.750957
5.65	-0.0044	0.0081	3.0217	-0.0386	1.0752	-0.116538	3.248972	-0.000057	1.1561	-2.168169
5.66	-0.0028	0.0057	2.1229	-0.0352	1.1221	-0.074636	2.38217	-0.000043	1.2592	-1.391118
5.67	-0.0036	0.0049	1.8233	-0.0316	1.1646	-0.057633	2.123458	-0.000032	1.3564	-1.779643
5.68	-0.0036	0.0081	3.0217	-0.0279	1.2026	-0.084418	3.63374	-0.000022	1.4461	-1.779643
5.69	-0.0044	0.0069	2.5723	-0.0242	1.2357	-0.062132	3.178594	-0.000014	1.5270	-2.168169
5.7	-0.0040	0.0093	3.4711	-0.0203	1.2640	-0.07038	4.387448	-0.000008	1.5977	-1.973906
5.71	-0.0040	0.0089	3.3213	-0.0163	1.2873	-0.054196	4.275462	-0.000004	1.6571	-1.973906
5.72	-0.0044	0.0085	3.1715	-0.0123	1.3055	-0.038993	4.140385	-0.000002	1.7043	-2.168169
5.73	-0.0036	0.0065	2.4225	-0.0082	1.3186	-0.019922	3.194183	-0.000001	1.7386	-1.779643
5.74	-0.0063	0.0065	2.4225	-0.0041	1.3264	-0.009981	3.213217	0.000000	1.7594	-3.139482
5.75	-0.0005	0.0061	2.2727	0.0000	1.3290	-7.36E-14	3.020475	0.000000	1.7664	-0.225541
5.76	-0.0051	0.0081	3.0217	0.0041	1.3264	0.012449	4.008026	0.000000	1.7594	-2.556694
5.77	0.0019	0.0069	2.5723	0.0082	1.3186	0.021154	3.391708	0.000001	1.7386	0.940035
5.78	-0.0028	0.0069	2.5723	0.0123	1.3055	0.031626	3.358111	0.000002	1.7043	-1.391118
5.79	-0.0032	0.0073	2.7221	0.0163	1.2873	0.044418	3.504102	0.000004	1.6571	-1.58538
5.8	-0.0071	0.0077	2.8719	0.0203	1.2640	0.05823	3.630045	0.000008	1.5977	-3.528008
5.81	-0.0016	0.0077	2.8719	0.0242	1.2357	0.069368	3.548822	0.000014	1.5270	-0.808329
5.82	-0.0028	0.0069	2.5723	0.0279	1.2026	0.071862	3.093301	0.000022	1.4461	-1.391118
5.83	-0.0044	0.0061	2.2727	0.0316	1.1646	0.071839	2.646862	0.000032	1.3564	-2.168169
5.84	-0.0051	0.0057	2.1229	0.0352	1.1221	0.074636	2.38217	0.000043	1.2592	-2.556694
5.85	-0.0055	0.0069	2.5723	0.0386	1.0752	0.099206	2.765758	0.000057	1.1561	-2.750957
5.86	-0.0028	0.0069	2.5723	0.0418	1.0240	0.107583	2.634127	0.000073	1.0487	-1.391118
5.87	-0.0040	0.0077	2.8719	0.0449	0.9688	0.128994	2.782368	0.000091	0.9386	-1.973906
5.88	-0.0051	0.0065	2.4225	0.0478	0.9098	0.115869	2.203947	0.000109	0.8277	-2.556694
5.89	-0.0059	0.0053	1.9731	0.0506	0.8472	0.099752	1.671507	0.000129	0.7177	-2.94522
5.9	-0.0036	0.0049	1.8233	0.0531	0.7812	0.096784	1.424315	0.000150	0.6103	-1.779643
5.91	-0.0036	0.0049	1.8233	0.0554	0.7121	0.101009	1.29841	0.000170	0.5071	-1.779643
5.92	-0.0055	0.0065	2.4225	0.0575	0.6403	0.139288	1.55104	0.000190	0.4099	-2.750957
5.93	-0.0055	0.0065	2.4225	0.0594	0.5659	0.143822	1.370826	0.000209	0.3202	-2.750957
5.94	-0.0044	0.0049	1.8233	0.0610	0.4893	0.111231	0.892036	0.000227	0.2394	-2.168169
5.95	-0.0024	0.0069	2.5723	0.0624	0.4107	0.160518	1.056426	0.000243	0.1687	-1.196855
5.96	-0.0067	0.0073	2.7221	0.0636	0.3305	0.172996	0.8997	0.000257	0.1092	-3.333745
5.97	-0.0024	0.0037	1.3739	0.0645	0.2490	0.088548	0.34214	0.000268	0.0620	-1.196855
5.98	-0.0044	0.0057	2.1229	0.0651	0.1666	0.138192	0.353613	0.000276	0.0277	-2.168169
5.99	-0.0036	0.0049	1.8233	0.0655	0.0835	0.119396	0.152153	0.000281	0.0070	-1.779643
6	-0.0044	0.0073	2.7221	0.0656	0.0000	0.178608	1.91E-12	0.000282	0.0000	-2.168169
6.01	-0.0044	0.0089	3.3213	0.0655	-0.0835	0.217495	-0.277166	0.000281	0.0070	-2.168169
6.02	-0.0079	0.0029	1.0742	0.0651	-0.1666	0.06993	-0.17894	0.000276	0.0277	-3.916533
6.03	-0.0048	0.0061	2.2727	0.0645	-0.2490	0.146479	-0.565981	0.000268	0.0620	-2.362431
6.04	-0.0063	0.0101	3.7707	0.0636	-0.3305	0.23964	-1.246291	0.000257	0.1092	-3.139482
6.05	-0.0020	0.0041	1.5237	0.0624	-0.4107	0.095081	-0.625759	0.000243	0.1687	-1.002592
6.06	-0.0051	0.0069	2.5723	0.0610	-0.4893	0.156926	-1.258495	0.000227	0.2394	-2.556694
6.07	-0.0048	0.0069	2.5723	0.0594	-0.5659	0.152715	-1.455597	0.000209	0.3202	-2.362431
6.08	-0.0028	0.0061	2.2727	0.0575	-0.6403	0.130675	-1.455125	0.000190	0.4099	-1.391118
6.09	-0.0044	0.0089	3.3213	0.0554	-0.7121	0.184	-2.365215	0.000170	0.5071	-2.168169
6.1	-0.0044	0.0065	2.4225	0.0531	-0.7812	0.128593	-1.892416	0.000150	0.6103	-2.168169
6.11	-0.0032	0.0065	2.4225	0.0506	-0.8472	0.122472	-2.052231	0.000129	0.7177	-1.58538
6.12	-0.0071	0.0061	2.2727	0.0478	-0.9098	0.108704	-2.067657	0.000109	0.8277	-3.528008
6.13	-0.0063	0.0057	2.1229	0.0449	-0.9688	0.095351	-2.056698	0.000091	0.9386	-3.139482
6.14	-0.0032	0.0085	3.1715	0.0418	-1.0240	0.132645	-3.247748	0.000073	1.0487	-1.58538
6.15	-0.0067	0.0081	3.0217	0.0386	-1.0752	0.116538	-3.248972	0.000057	1.1561	-3.333745
6.16	-0.0063	0.0041	1.5237	0.0352	-1.1221	0.053569	-1.709764	0.000043	1.2592	-3.139482
6.17	-0.0051	0.0073	2.7221	0.0316	-1.1646	0.086045	-3.170267	0.000032	1.3564	-2.556694
6.18	-0.0048	0.0065	2.4225	0.0279	-1.2026	0.067677	-2.913154	0.000022	1.4461	-2.362431
6.19	-0.0040	0.0073	2.7221	0.0242	-1.2357	0.06575	-3.363708	0.000014	1.5270	-1.973906
6.2	-0.0044	0.0069	2.5723	0.0203	-1.2640	0.052155	-3.251344	0.000008	1.5977	-2.168169
6.21	-0.0083	0.0081	3.0217	0.0163	-1.2873	0.049307	-3.889782	0.000004	1.6571	-4.110796
6.22	-0.0048	0.0061	2.2727	0.0123	-1.3055	0.027942	-2.966974	0.000002	1.7043	-2.362431
6.23	-0.0051	0.0077	2.8719	0.0082	-1.3186	0.023617	-3.786758	0.000001	1.7386	-2.556694
6.24	-0.0036	0.0073	2.7221	0.0041	-1.3264	0.011215	-3.610621	0.000000	1.7594	-1.779643
6.25	-0.0063	0.0049	1.8233	0.0000	-1.3290	6.71E-14	-2.42319	0.000000	1.7664	-3.139482
6.26	-0.0040	0.0065	2.4225	-0.0041	-1.3264	-0.009981	-3.213217	0.000000	1.7594	-1.973906
6.27	-0.0079	0.0069	2.5723	-0.0082	-1.3186	-0.021154	-3.391708	-0.000001	1.7386	-3.916533
6.28	-0.0028	0.0061	2.2727	-0.0123	-1.3055	-0.027942	-2.966974	-0.000002	1.7043	-1.391118
6.29	-0.0059	0.0073	2.7221	-0.0163	-1.2873	-0.044418	-3.504102	-0.000004	1.6571	-2.94522
6.3	-0.0032	0.0065	2.4225	-0.0203	-1.2640	-0.049118	-3.061993	-0.000008	1.5977	-1.58538
6.31	-0.0055	0.0041	1.5237	-0.0242	-1.2357	-0.036803	-1.882797	-0.000014	1.5270	-2.750957
6.32	-0.0040	0.0057	2.1229	-0.0279	-1.2026	-0.059307	-2.552861	-0.000022	1.4461	-1.973906
6.33	-0.0051	0.0061	2.2727	-0.0316	-1.1646	-0.071839	-2.646862	-0.000032	1.3564	-2.556694

6.34	0.0023	0.0057	2.1229	-0.0352	-1.1221	-0.074636	-2.38217	-0.000043	1.2592	1.134298
6.35	-0.0044	0.0065	2.4225	-0.0386	-1.0752	-0.093428	-2.604687	-0.000057	1.1561	-2.168169
6.36	-0.0040	0.0053	1.9731	-0.0418	-1.0240	-0.082522	-2.020505	-0.000073	1.0487	-1.973906
6.37	-0.0048	0.0073	2.7221	-0.0449	-0.9688	-0.122265	-2.637234	-0.000091	0.9386	-2.362431
6.38	-0.0044	0.0065	2.4225	-0.0478	-0.9098	-0.115869	-2.203947	-0.000109	0.8277	-2.168169
6.39	-0.0067	0.0065	2.4225	-0.0506	-0.8472	-0.122472	-2.052231	-0.000129	0.7177	-3.333745
6.4	-0.0020	0.0057	2.1229	-0.0531	-0.7812	-0.112689	-1.658366	-0.000150	0.6103	-1.002592
6.41	-0.0032	0.0057	2.1229	-0.0554	-0.7121	-0.117607	-1.511771	-0.000170	0.5071	-1.58538
6.42	-0.0036	0.0061	2.2727	-0.0575	-0.6403	-0.130675	-1.455125	-0.000190	0.4099	-1.779643
6.43	-0.0044	0.0049	1.8233	-0.0594	-0.5659	-0.108246	-1.031744	-0.000209	0.3202	-2.168169
6.44	-0.0055	0.0065	2.4225	-0.0610	-0.4893	-0.147787	-1.185203	-0.000227	0.2394	-2.750957
6.45	-0.0005	0.0065	2.4225	-0.0624	-0.4107	-0.15117	-0.994902	-0.000243	0.1687	-0.225541
6.46	-0.0016	0.0077	2.8719	-0.0636	-0.3305	-0.182517	-0.949213	-0.000257	0.1092	-0.808329
6.47	-0.0055	0.0065	2.4225	-0.0645	-0.2490	-0.156134	-0.603287	-0.000268	0.0620	-2.750957
6.48	-0.0024	0.0057	2.1229	-0.0651	-0.1666	-0.138192	-0.353613	-0.000276	0.0277	-1.196855
6.49	-0.0028	0.0045	1.6735	-0.0655	-0.0835	-0.109586	-0.139652	-0.000281	0.0070	-1.391118
6.5	-0.0059	0.0073	2.7221	-0.0656	0.0000	-0.178608	-2.15E-12	-0.000282	0.0000	-2.94522
6.51	-0.0020	0.0065	2.4225	-0.0655	0.0835	-0.158636	0.202158	-0.000281	0.0070	-1.002592
6.52	-0.0036	0.0069	2.5723	-0.0651	0.1666	-0.167448	0.428472	-0.000276	0.0277	-1.779643
6.53	-0.0051	0.0093	3.4711	-0.0645	0.2490	-0.22372	0.864434	-0.000268	0.0620	-2.556694
6.54	-0.0032	0.0065	2.4225	-0.0636	0.3305	-0.153956	0.800675	-0.000257	0.1092	-1.58538
6.55	-0.0055	0.0049	1.8233	-0.0624	0.4107	-0.113777	0.748807	-0.000243	0.1687	-2.750957
6.56	-0.0008	0.0053	1.9731	-0.0610	0.4893	-0.12037	0.965328	-0.000227	0.2394	-0.419804
6.57	-0.0044	0.0081	3.0217	-0.0594	0.5659	-0.179397	1.709908	-0.000209	0.3202	-2.168169
6.58	-0.0063	0.0065	2.4225	-0.0575	0.6403	-0.139288	1.55104	-0.000190	0.4099	-3.139482
6.59	-0.0001	0.0061	2.2727	-0.0554	0.7121	-0.125906	1.618451	-0.000170	0.5071	-0.031278
6.6	-0.0055	0.0065	2.4225	-0.0531	0.7812	-0.128593	1.892416	-0.000150	0.6103	-2.750957
6.61	-0.0036	0.0061	2.2727	-0.0506	0.8472	-0.114899	1.925323	-0.000129	0.7177	-1.779643
6.62	-0.0044	0.0069	2.5723	-0.0478	0.9098	-0.123034	2.340237	-0.000109	0.8277	-2.168169
6.63	-0.0024	0.0061	2.2727	-0.0449	0.9688	-0.10208	2.201831	-0.000091	0.9386	-1.196855
6.64	-0.0040	0.0057	2.1229	-0.0418	1.0240	-0.088787	2.173911	-0.000073	1.0487	-1.973906
6.65	-0.0020	0.0081	3.0217	-0.0386	1.0752	-0.116538	3.248972	-0.000057	1.1561	-1.002592
6.66	-0.0040	0.0049	1.8233	-0.0352	1.1221	-0.064102	2.045967	-0.000043	1.2592	-1.973906
6.67	-0.0067	0.0053	1.9731	-0.0316	1.1646	-0.062369	2.297926	-0.000032	1.3564	-3.333745
6.68	-0.0028	0.0073	2.7221	-0.0279	1.2026	-0.076047	3.273447	-0.000022	1.4461	-1.391118
6.69	-0.0048	0.0057	2.1229	-0.0242	1.2357	-0.051276	2.623253	-0.000014	1.5270	-2.362431
6.7	-0.0044	0.0077	2.8719	-0.0203	1.2640	-0.05823	3.630045	-0.000008	1.5977	-2.168169
6.71	-0.0055	0.0077	2.8719	-0.0163	1.2873	-0.046862	3.696942	-0.000004	1.6571	-2.750957
6.72	-0.0044	0.0081	3.0217	-0.0123	1.3055	-0.037151	3.944817	-0.000002	1.7043	-2.168169
6.73	-0.0001	0.0061	2.2727	-0.0082	1.3186	-0.01869	2.996658	-0.000001	1.7386	-0.031278
6.74	-0.0067	0.0073	2.7221	-0.0041	1.3264	-0.011215	3.610621	0.000000	1.7594	-3.333745
6.75	-0.0048	0.0061	2.2727	0.0000	1.3290	-9.38E-14	3.020475	0.000000	1.7664	-2.362431
6.76	-0.0036	0.0073	2.7221	0.0041	1.3264	0.011215	3.610621	0.000000	1.7594	-1.779643
6.77	-0.0067	0.0077	2.8719	0.0082	1.3186	0.023617	3.786758	0.000001	1.7386	-3.333745
6.78	-0.0044	0.0065	2.4225	0.0123	1.3055	0.029784	3.162543	0.000002	1.7043	-2.168169
6.79	-0.0090	0.0065	2.4225	0.0163	1.2873	0.039529	3.118421	0.000004	1.6571	-4.499321
6.8	-0.0075	0.0049	1.8233	0.0203	1.2640	0.036968	2.304591	0.000008	1.5977	-3.722271
6.81	-0.0075	0.0093	3.4711	0.0242	1.2357	0.083842	4.289278	0.000014	1.5270	-3.722271
6.82	-0.0051	0.0065	2.4225	0.0279	1.2026	0.067677	2.913154	0.000022	1.4461	-2.556694
6.83	-0.0032	0.0065	2.4225	0.0316	1.1646	0.076574	2.821331	0.000032	1.3564	-1.58538
6.84	-0.0048	0.0081	3.0217	0.0352	1.1221	0.106236	3.390779	0.000043	1.2592	-2.362431
6.85	-0.0044	0.0085	3.1715	0.0386	1.0752	0.122316	3.410043	0.000057	1.1561	-2.168169
6.86	-0.0036	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-1.779643
6.87	-0.0075	0.0081	3.0217	0.0449	0.9688	0.135723	2.927502	0.000091	0.9386	-3.722271
6.88	-0.0024	0.0073	2.7221	0.0478	0.9098	0.130199	2.476527	0.000109	0.8277	-1.196855
6.89	-0.0040	0.0073	2.7221	0.0506	0.8472	0.13762	2.306047	0.000129	0.7177	-1.973906
6.9	-0.0048	0.0069	2.5723	0.0531	0.7812	0.136545	2.009441	0.000150	0.6103	-2.362431
6.91	-0.0048	0.0073	2.7221	0.0554	0.7121	0.150804	1.938493	0.000170	0.5071	-2.362431
6.92	-0.0051	0.0073	2.7221	0.0575	0.6403	0.156515	1.742869	0.000190	0.4099	-2.556694
6.93	-0.0063	0.0093	3.4711	0.0594	0.5659	0.206078	1.96422	0.000209	0.3202	-3.139482
6.94	-0.0044	0.0081	3.0217	0.0610	0.4893	0.184343	1.47837	0.000227	0.2394	-2.168169
6.95	-0.0044	0.0069	2.5723	0.0624	0.4107	0.160518	1.056426	0.000243	0.1687	-2.168169
6.96	-0.0044	0.0069	2.5723	0.0636	0.3305	0.163476	0.850187	0.000257	0.1092	-2.168169
6.97	-0.0032	0.0061	2.2727	0.0645	0.2490	0.146479	0.565981	0.000268	0.0620	-1.58538
6.98	-0.0040	0.0093	3.4711	0.0651	0.1666	0.225958	0.578192	0.000276	0.0277	-1.973906
6.99	-0.0051	0.0089	3.3213	0.0655	0.0835	0.217495	0.277166	0.000281	0.0070	-2.556694
7	-0.0024	0.0073	2.7221	0.0656	0.0000	0.178608	2.4E-12	0.000282	0.0000	-1.196855
7.01	-0.0032	0.0057	2.1229	0.0655	-0.0835	0.139016	-0.177156	0.000281	0.0070	-1.58538
7.02	-0.0059	0.0057	2.1229	0.0651	-0.1666	0.138192	-0.353613	0.000276	0.0277	-2.94522
7.03	-0.0059	0.0077	2.8719	0.0645	-0.2490	0.185099	-0.715207	0.000268	0.0620	-2.94522
7.04	-0.0051	0.0065	2.4225	0.0636	-0.3305	0.153956	-0.800675	0.000257	0.1092	-2.556694

7.05	-0.0044	0.0049	1.8233	0.0624	-0.4107	0.113777	-0.748807	0.000243	0.1687	-2.168169
7.06	-0.0020	0.0065	2.4225	0.0610	-0.4893	0.147787	-1.185203	0.000227	0.2394	-1.002592
7.07	-0.0051	0.0057	2.1229	0.0594	-0.5659	0.126034	-1.201285	0.000209	0.3202	-2.556694
7.08	-0.0032	0.0053	1.9731	0.0575	-0.6403	0.113448	-1.263295	0.000190	0.4099	-1.58538
7.09	-0.0051	0.0077	2.8719	0.0554	-0.7121	0.159103	-2.045173	0.000170	0.5071	-2.556694
7.1	-0.0036	0.0061	2.2727	0.0531	-0.7812	0.120641	-1.775391	0.000150	0.6103	-1.779643
7.11	-0.0024	0.0073	2.7221	0.0506	-0.8472	0.13762	-2.306047	0.000129	0.7177	-1.196855
7.12	-0.0040	0.0041	1.5237	0.0478	-0.9098	0.072878	-1.386208	0.000109	0.8277	-1.973906
7.13	-0.0044	0.0073	2.7221	0.0449	-0.9688	0.122265	-2.637234	0.000091	0.9386	-2.168169
7.14	-0.0040	0.0065	2.4225	0.0418	-1.0240	0.101318	-2.480721	0.000073	1.0487	-1.973906
7.15	-0.0012	0.0061	2.2727	0.0386	-1.0752	0.087651	-2.443616	0.000057	1.1561	-0.614067
7.16	-0.0028	0.0041	1.5237	0.0352	-1.1221	0.053569	-1.709764	0.000043	1.2592	-1.391118
7.17	-0.0024	0.0089	3.3213	0.0316	-1.1646	0.104986	-3.868141	0.000032	1.3564	-1.196855
7.18	-0.0032	0.0061	2.2727	0.0279	-1.2026	0.063492	-2.733007	0.000022	1.4461	-1.58538
7.19	-0.0067	0.0073	2.7221	0.0242	-1.2357	0.06575	-3.363708	0.000014	1.5270	-3.333745
7.2	-0.0044	0.0081	3.0217	0.0203	-1.2640	0.061268	-3.819396	0.000008	1.5977	-2.168169
7.21	-0.0012	0.0057	2.1229	0.0163	-1.2873	0.03464	-2.732741	0.000004	1.6571	-0.614067
7.22	-0.0051	0.0069	2.5723	0.0123	-1.3055	0.031626	-3.358111	0.000002	1.7043	-2.556694
7.23	-0.0051	0.0049	1.8233	0.0082	-1.3186	0.014994	-2.404082	0.000001	1.7386	-2.556694
7.24	-0.0059	0.0073	2.7221	0.0041	-1.3264	0.011215	-3.610621	0.000000	1.7594	-2.94522
7.25	-0.0005	0.0061	2.2727	0.0000	-1.3290	1.04E-13	-3.020475	0.000000	1.7664	-0.225541
7.26	-0.0051	0.0037	1.3739	-0.0041	-1.3264	-0.00566	-1.822302	0.000000	1.7594	-2.556694
7.27	-0.0024	0.0073	2.7221	-0.0082	-1.3186	-0.022385	-3.589233	-0.000001	1.7386	-1.196855
7.28	-0.0075	0.0081	3.0217	-0.0123	-1.3055	-0.037151	-3.944817	-0.000002	1.7043	-3.722271
7.29	-0.0036	0.0061	2.2727	-0.0163	-1.2873	-0.037085	-2.925581	-0.000004	1.6571	-1.779643
7.3	-0.0075	0.0065	2.4225	-0.0203	-1.2640	-0.049118	-3.061993	-0.000008	1.5977	-3.722271
7.31	-0.0048	0.0073	2.7221	-0.0242	-1.2357	-0.06575	-3.363708	-0.000014	1.5270	-2.362431
7.32	-0.0036	0.0057	2.1229	-0.0279	-1.2026	-0.059307	-2.552861	-0.000022	1.4461	-1.779643
7.33	-0.0051	0.0073	2.7221	-0.0316	-1.1646	-0.086045	-3.170267	-0.000032	1.3564	-2.556694
7.34	-0.0036	0.0053	1.9731	-0.0352	-1.1221	-0.069369	-2.214068	-0.000043	1.2592	-1.779643
7.35	-0.0087	0.0061	2.2727	-0.0386	-1.0752	-0.087651	-2.443616	-0.000057	1.1561	-4.305059
7.36	-0.0083	0.0053	1.9731	-0.0418	-1.0240	-0.082522	-2.020505	-0.000073	1.0487	-4.110796
7.37	-0.0044	0.0049	1.8233	-0.0449	-0.9688	-0.081894	-1.766429	-0.000091	0.9386	-2.168169
7.38	-0.0036	0.0077	2.8719	-0.0478	-0.9098	-0.137365	-2.612817	-0.000109	0.8277	-1.779643
7.39	-0.0024	0.0073	2.7221	-0.0506	-0.8472	-0.13762	-2.306047	-0.000129	0.7177	-1.196855
7.4	-0.0055	0.0081	3.0217	-0.0531	-0.7812	-0.160401	-2.360516	-0.000150	0.6103	-2.750957
7.41	-0.0016	0.0049	1.8233	-0.0554	-0.7121	-0.101009	-1.29841	-0.000170	0.5071	-0.808329
7.42	-0.0063	0.0073	2.7221	-0.0575	-0.6403	-0.156515	-1.742869	-0.000190	0.4099	-3.139482
7.43	-0.0028	0.0069	2.5723	-0.0594	-0.5659	-0.152715	-1.455597	-0.000209	0.3202	-1.391118
7.44	-0.0059	0.0069	2.5723	-0.0610	-0.4893	-0.156926	-1.258495	-0.000227	0.2394	-2.94522
7.45	-0.0044	0.0089	3.3213	-0.0624	-0.4107	-0.207259	-1.364044	-0.000243	0.1687	-2.168169
7.46	-0.0055	0.0089	3.3213	-0.0636	-0.3305	-0.211078	-1.097752	-0.000257	0.1092	-2.750957
7.47	-0.0048	0.0081	3.0217	-0.0645	-0.2490	-0.194754	-0.752514	-0.000268	0.0620	-2.362431
7.48	-0.0028	0.0061	2.2727	-0.0651	-0.1666	-0.147944	-0.378566	-0.000276	0.0277	-1.391118
7.49	-0.0044	0.0065	2.4225	-0.0655	-0.0835	-0.158636	-0.202158	-0.000281	0.0070	-2.168169
7.5	-0.0024	0.0065	2.4225	-0.0656	0.0000	-0.158949	-2.35E-12	-0.000282	0.0000	-1.196855
7.51	-0.0090	0.0069	2.5723	-0.0655	0.0835	-0.168445	0.21466	-0.000281	0.0070	-4.499321
7.52	-0.0051	0.0069	2.5723	-0.0651	0.1666	-0.167448	0.428472	-0.000276	0.0277	-2.556694
7.53	-0.0044	0.0057	2.1229	-0.0645	0.2490	-0.136824	0.528674	-0.000268	0.0620	-2.168169
7.54	-0.0059	0.0077	2.8719	-0.0636	0.3305	-0.182517	0.949213	-0.000257	0.1092	-2.94522
7.55	-0.0071	0.0057	2.1229	-0.0624	0.4107	-0.132473	0.871854	-0.000243	0.1687	-3.528008
7.56	-0.0051	0.0049	1.8233	-0.0610	0.4893	-0.111231	0.892036	-0.000227	0.2394	-2.556694
7.57	-0.0005	0.0057	2.1229	-0.0594	0.5659	-0.126034	1.201285	-0.000209	0.3202	-0.225541
7.58	-0.0040	0.0077	2.8719	-0.0575	0.6403	-0.165129	1.838784	-0.000190	0.4099	-1.973906
7.59	-0.0055	0.0057	2.1229	-0.0554	0.7121	-0.117607	1.511771	-0.000170	0.5071	-2.750957
7.6	-0.0040	0.0049	1.8233	-0.0531	0.7812	-0.096784	1.424315	-0.000150	0.6103	-1.973906
7.61	-0.0106	0.0081	3.0217	-0.0506	0.8472	-0.152767	2.559863	-0.000129	0.7177	-5.276373
7.62	-0.0028	0.0057	2.1229	-0.0478	0.9098	-0.101539	1.931368	-0.000109	0.8277	-1.391118
7.63	-0.0071	0.0077	2.8719	-0.0449	0.9688	-0.128994	2.782368	-0.000091	0.9386	-3.528008
7.64	-0.0051	0.0061	2.2727	-0.0418	1.0240	-0.095053	2.327316	-0.000073	1.0487	-2.556694
7.65	-0.0040	0.0073	2.7221	-0.0386	1.0752	-0.104983	2.926829	-0.000057	1.1561	-1.973906
7.66	-0.0032	0.0077	2.8719	-0.0352	1.1221	-0.10097	3.222677	-0.000043	1.2592	-1.58538
7.67	-0.0044	0.0077	2.8719	-0.0316	1.1646	-0.09078	3.344736	-0.000032	1.3564	-2.168169
7.68	-0.0036	0.0065	2.4225	-0.0279	1.2026	-0.067677	2.913154	-0.000022	1.4461	-1.779643
7.69	-0.0020	0.0045	1.6735	-0.0242	1.2357	-0.040421	2.067911	-0.000014	1.5270	-1.002592
7.7	-0.0048	0.0057	2.1229	-0.0203	1.2640	-0.043043	2.683292	-0.000008	1.5977	-2.362431
7.71	-0.0036	0.0065	2.4225	-0.0163	1.2873	-0.039529	3.118421	-0.000004	1.6571	-1.779643
7.72	-0.0036	0.0057	2.1229	-0.0123	1.3055	-0.0261	2.771406	-0.000002	1.7043	-1.779643
7.73	-0.0028	0.0049	1.8233	-0.0082	1.3186	-0.014994	2.404082	-0.000001	1.7386	-1.391118
7.74	-0.0075	0.0069	2.5723	-0.0041	1.3264	-0.010598	3.411919	0.000000	1.7594	-3.722271
7.75	-0.0044	0.0073	2.7221	0.0000	1.3290	-1.36E-13	3.61776	0.000000	1.7664	-2.168169

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7.76	-0.0040	0.0077	2.8719	0.0041	1.3264	0.011832	3.809324	0.000000	1.7594	-1.973906
7.77	-0.0071	0.0061	2.2727	0.0082	1.3186	0.01869	2.996658	0.000001	1.7386	-3.528008
7.78	-0.0044	0.0077	2.8719	0.0123	1.3055	0.03531	3.749248	0.000002	1.7043	-2.168169
7.79	-0.0040	0.0065	2.4225	0.0163	1.2873	0.039529	3.118421	0.000004	1.6571	-1.973906
7.8	-0.0075	0.0077	2.8719	0.0203	1.2640	0.05823	3.630045	0.000008	1.5977	-3.722271
7.81	-0.0063	0.0061	2.2727	0.0242	1.2357	0.054895	2.808367	0.000014	1.5270	-3.139482
7.82	-0.0032	0.0057	2.1229	0.0279	1.2026	0.059307	2.552861	0.000022	1.4461	-1.58538
7.83	-0.0032	0.0053	1.9731	0.0316	1.1646	0.062369	2.297926	0.000032	1.3564	-1.58538
7.84	-0.0048	0.0081	3.0217	0.0352	1.1221	0.106236	3.390779	0.000043	1.2592	-2.362431
7.85	-0.0036	0.0073	2.7221	0.0386	1.0752	0.104983	2.926829	0.000057	1.1561	-1.779643
7.86	-0.0048	0.0089	3.3213	0.0418	1.0240	0.138911	3.401154	0.000073	1.0487	-2.362431
7.87	-0.0063	0.0089	3.3213	0.0449	0.9688	0.14918	3.21777	0.000091	0.9386	-3.139482
7.88	-0.0075	0.0049	1.8233	0.0478	0.9098	0.087208	1.658788	0.000109	0.8277	-3.722271
7.89	-0.0040	0.0077	2.8719	0.0506	0.8472	0.145193	2.432955	0.000129	0.7177	-1.973906
7.9	-0.0036	0.0073	2.7221	0.0531	0.7812	0.144497	2.126466	0.000150	0.6103	-1.779643
7.91	-0.0028	0.0069	2.5723	0.0554	0.7121	0.142504	1.831812	0.000170	0.5071	-1.391118
7.92	-0.0048	0.0065	2.4225	0.0575	0.6403	0.139288	1.55104	0.000190	0.4099	-2.362431
7.93	-0.0083	0.0073	2.7221	0.0594	0.5659	0.161609	1.540367	0.000209	0.3202	-4.110796
7.94	-0.0075	0.0061	2.2727	0.0610	0.4893	0.138648	1.111911	0.000227	0.2394	-3.722271
7.95	-0.0044	0.0061	2.2727	0.0624	0.4107	0.141822	0.933378	0.000243	0.1687	-2.168169
7.96	-0.0059	0.0069	2.5723	0.0636	0.3305	0.163476	0.850187	0.000257	0.1092	-2.94522
7.97	-0.0059	0.0069	2.5723	0.0645	0.2490	0.165789	0.640594	0.000268	0.0620	-2.94522
7.98	-0.0036	0.0049	1.8233	0.0651	0.1666	0.118689	0.303706	0.000276	0.0277	-1.779643
7.99	-0.0059	0.0053	1.9731	0.0655	0.0835	0.129206	0.164655	0.000281	0.0070	-2.94522
8	-0.0063	0.0089	3.3213	0.0656	0.0000	0.217925	3.52E-12	0.000282	0.0000	-3.139482
8.01	-0.0016	0.0089	3.3213	0.0655	-0.0835	0.217495	-0.277166	0.000281	0.0070	-0.808329
8.02	-0.0040	0.0069	2.5723	0.0651	-0.1666	0.167448	-0.428472	0.000276	0.0277	-1.973906
8.03	-0.0075	0.0077	2.8719	0.0645	-0.2490	0.185099	-0.715207	0.000268	0.0620	-3.722271
8.04	-0.0063	0.0085	3.1715	0.0636	-0.3305	0.201558	-1.048239	0.000257	0.1092	-3.139482
8.05	-0.0059	0.0069	2.5723	0.0624	-0.4107	0.160518	-1.056426	0.000243	0.1687	-2.94522
8.06	-0.0032	0.0073	2.7221	0.0610	-0.4893	0.166065	-1.331786	0.000227	0.2394	-1.58538
8.07	-0.0087	0.0069	2.5723	0.0594	-0.5659	0.152715	-1.455597	0.000209	0.3202	-4.305059
8.08	-0.0020	0.0065	2.4225	0.0575	-0.6403	0.139288	-1.55104	0.000190	0.4099	-1.002592
8.09	-0.0040	0.0057	2.1229	0.0554	-0.7121	0.117607	-1.511771	0.000170	0.5071	-1.973906
8.1	-0.0036	0.0053	1.9731	0.0531	-0.7812	0.104737	-1.54134	0.000150	0.6103	-1.779643
8.11	-0.0040	0.0077	2.8719	0.0506	-0.8472	0.145193	-2.432955	0.000129	0.7177	-1.973906
8.12	-0.0040	0.0061	2.2727	0.0478	-0.9098	0.108704	-2.067657	0.000109	0.8277	-1.973906
8.13	-0.0040	0.0041	1.5237	0.0449	-0.9688	0.068437	-1.476161	0.000091	0.9386	-1.973906
8.14	-0.0036	0.0057	2.1229	0.0418	-1.0240	0.088787	-2.173911	0.000073	1.0487	-1.779643
8.15	-0.0071	0.0069	2.5723	0.0386	-1.0752	0.099206	-2.765758	0.000057	1.1561	-3.528008
8.16	-0.0036	0.0057	2.1229	0.0352	-1.1221	0.074636	-2.38217	0.000043	1.2592	-1.779643
8.17	-0.0020	0.0065	2.4225	0.0316	-1.1646	0.076574	-2.821331	0.000032	1.3564	-1.002592
8.18	-0.0032	0.0057	2.1229	0.0279	-1.2026	0.059307	-2.552861	0.000022	1.4461	-1.58538
8.19	-0.0040	0.0041	1.5237	0.0242	-1.2357	0.036803	-1.882797	0.000014	1.5270	-1.973906
8.2	-0.0051	0.0057	2.1229	0.0203	-1.2640	0.043043	-2.683292	0.000008	1.5977	-2.556694
8.21	-0.0059	0.0061	2.2727	0.0163	-1.2873	0.037085	-2.925581	0.000004	1.6571	-2.94522
8.22	-0.0024	0.0053	1.9731	0.0123	-1.3055	0.024259	-2.575837	0.000002	1.7043	-1.196855
8.23	-0.0051	0.0061	2.2727	0.0082	-1.3186	0.01869	-2.996658	0.000001	1.7386	-2.556694
8.24	-0.0055	0.0089	3.3213	0.0041	-1.3264	0.013684	-4.40543	0.000000	1.7594	-2.750957
8.25	-0.0028	0.0061	2.2727	0.0000	-1.3290	1.23E-13	-3.020475	0.000000	1.7664	-1.391118
8.26	-0.0055	0.0069	2.5723	-0.0041	-1.3264	-0.010598	-3.411919	0.000000	1.7594	-2.750957
8.27	-0.0051	0.0069	2.5723	-0.0082	-1.3186	-0.021154	-3.391708	-0.000001	1.7386	-2.556694
8.28	-0.0051	0.0057	2.1229	-0.0123	-1.3055	-0.0261	-2.771406	-0.000002	1.7043	-2.556694
8.29	-0.0040	0.0065	2.4225	-0.0163	-1.2873	-0.039529	-3.118421	-0.000004	1.6571	-1.973906
8.3	-0.0036	0.0081	3.0217	-0.0203	-1.2640	-0.061268	-3.819396	-0.000008	1.5977	-1.779643
8.31	-0.0012	0.0081	3.0217	-0.0242	-1.2357	-0.072987	-3.733936	-0.000014	1.5270	-0.614067
8.32	-0.0040	0.0057	2.1229	-0.0279	-1.2026	-0.059307	-2.552861	-0.000022	1.4461	-1.973906
8.33	-0.0032	0.0077	2.8719	-0.0316	-1.1646	-0.09078	-3.344736	-0.000032	1.3564	-1.58538
8.34	-0.0083	0.0077	2.8719	-0.0352	-1.1221	-0.10097	-3.222677	-0.000043	1.2592	-4.110796
8.35	-0.0040	0.0065	2.4225	-0.0386	-1.0752	-0.093428	-2.604687	-0.000057	1.1561	-1.973906
8.36	-0.0067	0.0089	3.3213	-0.0418	-1.0240	-0.138911	-3.401154	-0.000073	1.0487	-3.333745
8.37	-0.0024	0.0085	3.1715	-0.0449	-0.9688	-0.142451	-3.072636	-0.000091	0.9386	-1.196855
8.38	-0.0055	0.0061	2.2727	-0.0478	-0.9098	-0.108704	-2.067657	-0.000109	0.8277	-2.750957
8.39	-0.0044	0.0081	3.0217	-0.0506	-0.8472	-0.152767	-2.559863	-0.000129	0.7177	-2.168169
8.4	-0.0044	0.0093	3.4711	-0.0531	-0.7812	-0.184257	-2.711592	-0.000150	0.6103	-2.168169
8.41	-0.0020	0.0073	2.7221	-0.0554	-0.7121	-0.150804	-1.938493	-0.000170	0.5071	-1.002592
8.42	-0.0040	0.0077	2.8719	-0.0575	-0.6403	-0.165129	-1.838784	-0.000190	0.4099	-1.973906
8.43	-0.0048	0.0061	2.2727	-0.0594	-0.5659	-0.134928	-1.286056	-0.000209	0.3202	-2.362431
8.44	-0.0040	0.0057	2.1229	-0.0610	-0.4893	-0.129509	-1.038619	-0.000227	0.2394	-1.973906
8.45	-0.0071	0.0065	2.4225	-0.0624	-0.4107	-0.15117	-0.994902	-0.000243	0.1687	-3.528008
8.46	-0.0055	0.0061	2.2727	-0.0636	-0.3305	-0.144435	-0.751162	-0.000257	0.1092	-2.750957

silinder tegak H2

8.47	-0.0036	0.0045	1.6735	-0.0645	-0.2490	-0.107858	-0.416754	-0.000268	0.0620	-1.779643
8.48	-0.0040	0.0081	3.0217	-0.0651	-0.1666	-0.196703	-0.503332	-0.000276	0.0277	-1.973906
8.49	-0.0005	0.0061	2.2727	-0.0655	-0.0835	-0.148826	-0.189657	-0.000281	0.0070	-0.225541
8.5	-0.0063	0.0065	2.4225	-0.0656	0.0000	-0.158949	-2.76E-12	-0.000282	0.0000	-3.139482
8.51	-0.0028	0.0053	1.9731	-0.0655	0.0835	-0.129206	0.164655	-0.000281	0.0070	-1.391118
8.52	-0.0067	0.0069	2.5723	-0.0651	0.1666	-0.167448	0.428472	-0.000276	0.0277	-3.333745
8.53	-0.0055	0.0065	2.4225	-0.0645	0.2490	-0.156134	0.603287	-0.000268	0.0620	-2.750957
8.54	-0.0032	0.0085	3.1715	-0.0636	0.3305	-0.201558	1.048239	-0.000257	0.1092	-1.58538
8.55	-0.0036	0.0057	2.1229	-0.0624	0.4107	-0.132473	0.871854	-0.000243	0.1687	-1.779643
8.56	-0.0044	0.0057	2.1229	-0.0610	0.4893	-0.129509	1.038619	-0.000227	0.2394	-2.168169
8.57	-0.0044	0.0045	1.6735	-0.0594	0.5659	-0.099353	0.946974	-0.000209	0.3202	-2.168169
8.58	-0.0040	0.0069	2.5723	-0.0575	0.6403	-0.147902	1.646954	-0.000190	0.4099	-1.973906
8.59	-0.0040	0.0045	1.6735	-0.0554	0.7121	-0.09271	1.19173	-0.000170	0.5071	-1.973906
8.6	-0.0024	0.0053	1.9731	-0.0531	0.7812	-0.104737	1.54134	-0.000150	0.6103	-1.196855
8.61	-0.0079	0.0073	2.7221	-0.0506	0.8472	-0.13762	2.306047	-0.000129	0.7177	-3.916533
8.62	-0.0032	0.0049	1.8233	-0.0478	0.9098	-0.087208	1.658788	-0.000109	0.8277	-1.58538
8.63	-0.0028	0.0065	2.4225	-0.0449	0.9688	-0.108808	2.346966	-0.000091	0.9386	-1.391118
8.64	-0.0024	0.0085	3.1715	-0.0418	1.0240	-0.132645	3.247748	-0.000073	1.0487	-1.196855
8.65	-0.0059	0.0077	2.8719	-0.0386	1.0752	-0.110761	3.087901	-0.000057	1.1561	-2.94522
8.66	-0.0059	0.0057	2.1229	-0.0352	1.1221	-0.074636	2.38217	-0.000043	1.2592	-2.94522
8.67	-0.0055	0.0085	3.1715	-0.0316	1.1646	-0.100251	3.693672	-0.000032	1.3564	-2.750957
8.68	-0.0051	0.0061	2.2727	-0.0279	1.2026	-0.063492	2.733007	-0.000022	1.4461	-2.556694
8.69	-0.0051	0.0065	2.4225	-0.0242	1.2357	-0.058513	2.99348	-0.000014	1.5270	-2.556694
8.7	-0.0028	0.0057	2.1229	-0.0203	1.2640	-0.043043	2.683292	-0.000008	1.5977	-1.391118
8.71	-0.0008	0.0089	3.3213	-0.0163	1.2873	-0.054196	4.275462	-0.000004	1.6571	-0.419804
8.72	-0.0055	0.0049	1.8233	-0.0123	1.3055	-0.022417	2.380269	-0.000002	1.7043	-2.750957
8.73	-0.0036	0.0077	2.8719	-0.0082	1.3186	-0.023617	3.786758	-0.000001	1.7386	-1.779643
8.74	-0.0028	0.0069	2.5723	-0.0041	1.3264	-0.010598	3.411919	0.000000	1.7594	-1.391118
8.75	-0.0040	0.0025	0.9244	0.0000	1.3290	-5.41E-14	1.22862	0.000000	1.7664	-1.973906
8.76	-0.0040	0.0081	3.0217	0.0041	1.3264	0.012449	4.008026	0.000000	1.7594	-1.973906
8.77	-0.0008	0.0081	3.0217	0.0082	1.3186	0.024849	3.984283	0.000001	1.7386	-0.419804
8.78	-0.0040	0.0073	2.7221	0.0123	1.3055	0.033468	3.55368	0.000002	1.7043	-1.973906
8.79	-0.0059	0.0061	2.2727	0.0163	1.2873	0.037085	2.925581	0.000004	1.6571	-2.94522
8.8	-0.0067	0.0073	2.7221	0.0203	1.2640	0.055193	3.440694	0.000008	1.5977	-3.333745
8.81	-0.0048	0.0049	1.8233	0.0242	1.2357	0.04404	2.253025	0.000014	1.5270	-2.362431
8.82	-0.0048	0.0053	1.9731	0.0279	1.2026	0.055122	2.372714	0.000022	1.4461	-2.362431
8.83	-0.0040	0.0073	2.7221	0.0316	1.1646	0.086045	3.170267	0.000032	1.3564	-1.973906
8.84	-0.0036	0.0105	3.9205	0.0352	1.1221	0.137837	4.399388	0.000043	1.2592	-1.779643
8.85	-0.0036	0.0073	2.7221	0.0386	1.0752	0.104983	2.926829	0.000057	1.1561	-1.779643
8.86	-0.0048	0.0065	2.4225	0.0418	1.0240	0.101318	2.480721	0.000073	1.0487	-2.362431
8.87	0.0011	0.0069	2.5723	0.0449	0.9688	0.115537	2.4921	0.000091	0.9386	0.55151
8.88	-0.0028	0.0093	3.4711	0.0478	0.9098	0.166026	3.157977	0.000109	0.8277	-1.391118
8.89	-0.0036	0.0065	2.4225	0.0506	0.8472	0.122472	2.052231	0.000129	0.7177	-1.779643
8.9	-0.0016	0.0073	2.7221	0.0531	0.7812	0.144497	2.126466	0.000150	0.6103	-0.808329
8.91	-0.0024	0.0077	2.8719	0.0554	0.7121	0.159103	2.045173	0.000170	0.5071	-1.196855
8.92	-0.0020	0.0069	2.5723	0.0575	0.6403	0.147902	1.646954	0.000190	0.4099	-1.002592
8.93	-0.0040	0.0041	1.5237	0.0594	0.5659	0.090459	0.862203	0.000209	0.3202	-1.973906
8.94	-0.0040	0.0085	3.1715	0.0610	0.4893	0.193482	1.551662	0.000227	0.2394	-1.973906
8.95	-0.0067	0.0041	1.5237	0.0624	0.4107	0.095081	0.625759	0.000243	0.1687	-3.333745
8.96	-0.0040	0.0065	2.4225	0.0636	0.3305	0.153956	0.800675	0.000257	0.1092	-1.973906
8.97	-0.0020	0.0057	2.1229	0.0645	0.2490	0.136824	0.528674	0.000268	0.0620	-1.002592
8.98	-0.0044	0.0069	2.5723	0.0651	0.1666	0.167448	0.428472	0.000276	0.0277	-2.168169
8.99	-0.0067	0.0073	2.7221	0.0655	0.0835	0.178255	0.227161	0.000281	0.0070	-3.333745
9	-0.0036	0.0093	3.4711	0.0656	0.0000	0.227754	4.27E-12	0.000282	0.0000	-1.779643
9.01	-0.0063	0.0069	2.5723	0.0655	-0.0835	0.168445	-0.21466	0.000281	0.0070	-3.139482
9.02	-0.0040	0.0061	2.2727	0.0651	-0.1666	0.147944	-0.378566	0.000276	0.0277	-1.973906
9.03	-0.0036	0.0057	2.1229	0.0645	-0.2490	0.136824	-0.528674	0.000268	0.0620	-1.779643
9.04	-0.0059	0.0061	2.2727	0.0636	-0.3305	0.144435	-0.751162	0.000257	0.1092	-2.94522
9.05	-0.0044	0.0069	2.5723	0.0624	-0.4107	0.160518	-1.056426	0.000243	0.1687	-2.168169
9.06	-0.0044	0.0073	2.7221	0.0610	-0.4893	0.166065	-1.331786	0.000227	0.2394	-2.168169
9.07	-0.0028	0.0065	2.4225	0.0594	-0.5659	0.143822	-1.370826	0.000209	0.3202	-1.391118
9.08	-0.0036	0.0085	3.1715	0.0575	-0.6403	0.182356	-2.030614	0.000190	0.4099	-1.779643
9.09	-0.0051	0.0073	2.7221	0.0554	-0.7121	0.150804	-1.938493	0.000170	0.5071	-2.556694
9.1	-0.0024	0.0057	2.1229	0.0531	-0.7812	0.112689	-1.658366	0.000150	0.6103	-1.196855
9.11	-0.0051	0.0069	2.5723	0.0506	-0.8472	0.130046	-2.179139	0.000129	0.7177	-2.556694
9.12	-0.0059	0.0057	2.1229	0.0478	-0.9098	0.101539	-1.931368	0.000109	0.8277	-2.94522
9.13	-0.0055	0.0093	3.4711	0.0449	-0.9688	0.155908	-3.362904	0.000091	0.9386	-2.750957
9.14	-0.0055	0.0069	2.5723	0.0418	-1.0240	0.107583	-2.634127	0.000073	1.0487	-2.750957
9.15	-0.0032	0.0049	1.8233	0.0386	-1.0752	0.070318	-1.960402	0.000057	1.1561	-1.58538
9.16	-0.0024	0.0057	2.1229	0.0352	-1.1221	0.074636	-2.38217	0.000043	1.2592	-1.196855
9.17	-0.0020	0.0061	2.2727	0.0316	-1.1646	0.071839	-2.646862	0.000032	1.3564	-1.002592

9.18	-0.0028	0.0073	2.7221	0.0279	-1.2026	0.076047	-3.273447	0.000022	1.4461	-1.391118
9.19	-0.0067	0.0073	2.7221	0.0242	-1.2357	0.06575	-3.363708	0.000014	1.5270	-3.333745
9.2	-0.0036	0.0073	2.7221	0.0203	-1.2640	0.055193	-3.440694	0.000008	1.5977	-1.779643
9.21	-0.0032	0.0061	2.2727	0.0163	-1.2873	0.037085	-2.925581	0.000004	1.6571	-1.58538
9.22	-0.0083	0.0085	3.1715	0.0123	-1.3055	0.038993	-4.140385	0.000002	1.7043	-4.110796
9.23	-0.0032	0.0069	2.5723	0.0082	-1.3186	0.021154	-3.391708	0.000001	1.7386	-1.58538
9.24	-0.0048	0.0093	3.4711	0.0041	-1.3264	0.014301	-4.604132	0.000000	1.7594	-2.362431
9.25	-0.0071	0.0073	2.7221	0.0000	-1.3290	1.71E-13	-3.61776	0.000000	1.7664	-3.528008
9.26	-0.0063	0.0057	2.1229	-0.0041	-1.3264	-0.008746	-2.815813	0.000000	1.7594	-3.139482
9.27	-0.0040	0.0077	2.8719	-0.0082	-1.3186	-0.023617	-3.786758	-0.000001	1.7386	-1.973906
9.28	-0.0040	0.0069	2.5723	-0.0123	-1.3055	-0.031626	-3.358111	-0.000002	1.7043	-1.973906
9.29	-0.0055	0.0061	2.2727	-0.0163	-1.2873	-0.037085	-2.925581	-0.000004	1.6571	-2.750957
9.3	-0.0024	0.0053	1.9731	-0.0203	-1.2640	-0.040006	-2.493941	-0.000008	1.5977	-1.196855
9.31	-0.0032	0.0057	2.1229	-0.0242	-1.2357	-0.051276	-2.623253	-0.000014	1.5270	-1.58538
9.32	-0.0016	0.0053	1.9731	-0.0279	-1.2026	-0.055122	-2.372714	-0.000022	1.4461	-0.808329
9.33	0.0015	0.0057	2.1229	-0.0316	-1.1646	-0.067104	-2.472394	-0.000032	1.3564	0.745773
9.34	-0.0083	0.0073	2.7221	-0.0352	-1.1221	-0.095703	-3.054576	-0.000043	1.2592	-4.110796
9.35	-0.0079	0.0081	3.0217	-0.0386	-1.0752	-0.116538	-3.248972	-0.000057	1.1561	-3.916533
9.36	-0.0036	0.0061	2.2727	-0.0418	-1.0240	-0.095053	-2.327316	-0.000073	1.0487	-1.779643
9.37	-0.0051	0.0065	2.4225	-0.0449	-0.9688	-0.108808	-2.346966	-0.000091	0.9386	-2.556694
9.38	-0.0048	0.0057	2.1229	-0.0478	-0.9098	-0.101539	-1.931368	-0.000109	0.8277	-2.362431
9.39	-0.0016	0.0069	2.5723	-0.0506	-0.8472	-0.130046	-2.179139	-0.000129	0.7177	-0.808329
9.4	-0.0063	0.0053	1.9731	-0.0531	-0.7812	-0.104737	-1.54134	-0.000150	0.6103	-3.139482
9.41	-0.0012	0.0057	2.1229	-0.0554	-0.7121	-0.117607	-1.511771	-0.000170	0.5071	-0.614067
9.42	-0.0055	0.0077	2.8719	-0.0575	-0.6403	-0.165129	-1.838784	-0.000190	0.4099	-2.750957
9.43	-0.0040	0.0069	2.5723	-0.0594	-0.5659	-0.152715	-1.455597	-0.000209	0.3202	-1.973906
9.44	-0.0071	0.0061	2.2727	-0.0610	-0.4893	-0.138648	-1.111911	-0.000227	0.2394	-3.528008
9.45	-0.0071	0.0057	2.1229	-0.0624	-0.4107	-0.132473	-0.871854	-0.000243	0.1687	-3.528008
9.46	-0.0036	0.0073	2.7221	-0.0636	-0.3305	-0.172996	-0.8997	-0.000257	0.1092	-1.779643
9.47	-0.0051	0.0097	3.6209	-0.0645	-0.2490	-0.233375	-0.901741	-0.000268	0.0620	-2.556694
9.48	-0.0024	0.0065	2.4225	-0.0651	-0.1666	-0.157696	-0.403519	-0.000276	0.0277	-1.196855
9.49	-0.0048	0.0069	2.5723	-0.0655	-0.0835	-0.168445	-0.21466	-0.000281	0.0070	-2.362431
9.5	-0.0063	0.0077	2.8719	-0.0656	0.0000	-0.188437	-3.79E-12	-0.000282	0.0000	-3.139482
9.51	-0.0028	0.0045	1.6735	-0.0655	0.0835	-0.109586	0.139652	-0.000281	0.0070	-1.391118
9.52	-0.0059	0.0077	2.8719	-0.0651	0.1666	-0.186951	0.478379	-0.000276	0.0277	-2.94522
9.53	-0.0063	0.0053	1.9731	-0.0645	0.2490	-0.127168	0.491367	-0.000268	0.0620	-3.139482
9.54	-0.0024	0.0065	2.4225	-0.0636	0.3305	-0.153956	0.800675	-0.000257	0.1092	-1.196855
9.55	-0.0048	0.0053	1.9731	-0.0624	0.4107	-0.123125	0.810331	-0.000243	0.1687	-2.362431
9.56	-0.0051	0.0077	2.8719	-0.0610	0.4893	-0.175204	1.405078	-0.000227	0.2394	-2.556694
9.57	-0.0040	0.0089	3.3213	-0.0594	0.5659	-0.197184	1.87945	-0.000209	0.3202	-1.973906
9.58	-0.0036	0.0073	2.7221	-0.0575	0.6403	-0.156515	1.742869	-0.000190	0.4099	-1.779643
9.59	-0.0028	0.0089	3.3213	-0.0554	0.7121	-0.184	2.365215	-0.000170	0.5071	-1.391118
9.6	-0.0036	0.0061	2.2727	-0.0531	0.7812	-0.120641	1.775391	-0.000150	0.6103	-1.779643
9.61	-0.0059	0.0081	3.0217	-0.0506	0.8472	-0.152767	2.559863	-0.000129	0.7177	-2.94522
9.62	-0.0063	0.0085	3.1715	-0.0478	0.9098	-0.151695	2.885397	-0.000109	0.8277	-3.139482
9.63	-0.0028	0.0069	2.5723	-0.0449	0.9688	-0.115537	2.4921	-0.000091	0.9386	-1.391118
9.64	-0.0028	0.0053	1.9731	-0.0418	1.0240	-0.082522	2.020505	-0.000073	1.0487	-1.391118
9.65	-0.0024	0.0045	1.6735	-0.0386	1.0752	-0.064541	1.799331	-0.000057	1.1561	-1.196855
9.66	-0.0055	0.0065	2.4225	-0.0352	1.1221	-0.085169	2.718373	-0.000043	1.2592	-2.750957
9.67	-0.0055	0.0085	3.1715	-0.0316	1.1646	-0.100251	3.693672	-0.000032	1.3564	-2.750957
9.68	-0.0032	0.0061	2.2727	-0.0279	1.2026	-0.063492	2.733007	-0.000022	1.4461	-1.58538
9.69	-0.0048	0.0061	2.2727	-0.0242	1.2357	-0.054895	2.808367	-0.000014	1.5270	-2.362431
9.7	-0.0071	0.0081	3.0217	-0.0203	1.2640	-0.061268	3.819396	-0.000008	1.5977	-3.528008
9.71	-0.0048	0.0041	1.5237	-0.0163	1.2873	-0.024862	1.961381	-0.000004	1.6571	-2.362431
9.72	-0.0044	0.0073	2.7221	-0.0123	1.3055	-0.033468	3.55368	-0.000002	1.7043	-2.168169
9.73	-0.0067	0.0081	3.0217	-0.0082	1.3186	-0.024849	3.984283	-0.000001	1.7386	-3.333745
9.74	-0.0040	0.0065	2.4225	-0.0041	1.3264	-0.009981	3.213217	0.000000	1.7594	-1.973906
9.75	-0.0032	0.0069	2.5723	0.0000	1.3290	-1.73E-13	3.418665	0.000000	1.7664	-1.58538
9.76	-0.0024	0.0057	2.1229	0.0041	1.3264	0.008746	2.815813	0.000000	1.7594	-1.196855
9.77	-0.0040	0.0053	1.9731	0.0082	1.3186	0.016226	2.601608	0.000001	1.7386	-1.973906
9.78	-0.0051	0.0073	2.7221	0.0123	1.3055	0.033468	3.55368	0.000002	1.7043	-2.556694
9.79	-0.0044	0.0069	2.5723	0.0163	1.2873	0.041974	3.311261	0.000004	1.6571	-2.168169
9.8	-0.0020	0.0049	1.8233	0.0203	1.2640	0.036968	2.304591	0.000008	1.5977	-1.002592
9.81	-0.0051	0.0053	1.9731	0.0242	1.2357	0.047658	2.438139	0.000014	1.5270	-2.556694
9.82	-0.0051	0.0065	2.4225	0.0279	1.2026	0.067677	2.913154	0.000022	1.4461	-2.556694
9.83	-0.0032	0.0073	2.7221	0.0316	1.1646	0.086045	3.170267	0.000032	1.3564	-1.58538
9.84	-0.0032	0.0073	2.7221	0.0352	1.1221	0.095703	3.054576	0.000043	1.2592	-1.58538
9.85	-0.0067	0.0077	2.8719	0.0386	1.0752	0.110761	3.087901	0.000057	1.1561	-3.333745
9.86	-0.0059	0.0069	2.5723	0.0418	1.0240	0.107583	2.634127	0.000073	1.0487	-2.94522
9.87	-0.0001	0.0081	3.0217	0.0449	0.9688	0.135723	2.927502	0.000091	0.9386	-0.031278
9.88	-0.0044	0.0061	2.2727	0.0478	0.9098	0.108704	2.067657	0.000109	0.8277	-2.168169

silinder tegak H2

9.89	-0.0001	0.0081	3.0217	0.0506	0.8472	0.152767	2.559863	0.000129	0.7177	-0.031278
9.9	-0.0051	0.0049	1.8233	0.0531	0.7812	0.096784	1.424315	0.000150	0.6103	-2.556694
9.91	-0.0059	0.0081	3.0217	0.0554	0.7121	0.167402	2.151854	0.000170	0.5071	-2.94522
9.92	-0.0040	0.0069	2.5723	0.0575	0.6403	0.147902	1.646954	0.000190	0.4099	-1.973906
9.93	-0.0048	0.0073	2.7221	0.0594	0.5659	0.161609	1.540367	0.000209	0.3202	-2.362431
9.94	-0.0020	0.0057	2.1229	0.0610	0.4893	0.129509	1.038619	0.000227	0.2394	-1.002592
9.95	-0.0059	0.0061	2.2727	0.0624	0.4107	0.141822	0.933378	0.000243	0.1687	-2.94522
9.96	-0.0075	0.0053	1.9731	0.0636	0.3305	0.125394	0.652136	0.000257	0.1092	-3.722271
9.97	-0.0032	0.0069	2.5723	0.0645	0.2490	0.165789	0.640594	0.000268	0.0620	-1.58538
9.98	-0.0087	0.0069	2.5723	0.0651	0.1666	0.167448	0.428472	0.000276	0.0277	-4.305059
9.99	-0.0028	0.0065	2.4225	0.0655	0.0835	0.158636	0.202158	0.000281	0.0070	-1.391118
10	-0.0080	0.0089	3.3213	0.0656	0.0000	0.217925	4.68E-12	0.000282	0.0000	-3.976871
		rata-rata	2.4843		2.0227					-0.8833
			max	0.0656	rata-rata	0.10693	1.728785	0.00167	0.0971	

Cl = 0.773

A= 64.14668 B= 17.7951
cd= 1.263 cm = 2.1949

Kc 0.645811

silinder tegak H4

Model : SILINDER
Posisi : -
H : 4 Cm

Perioda : 1 detik
waktu : 10 detik

t	trans	longitu	F long	u	u dot	F*u	F* u dot	u^3	u dot^2	F trans
det	Eta 2	Eta 1	N	m/det	m/det^2					N
0.01	-0.00475	0.008503	3.1715	0.1363	-0.1736	0.432392	-0.550451	0.002534	0.0301	-2.362431
0.02	-0.002797	0.007298	2.7221	0.1355	-0.3464	0.368922	-0.943036	0.002489	0.1200	-1.391118
0.03	-0.0055	0.0073	2.7221	0.1342	-0.5179	0.365268	-1.409901	0.002416	0.2683	-2.750957
0.04	-0.0048	0.0085	3.1715	0.1323	-0.6874	0.419636	-2.180132	0.002316	0.4725	-2.362431
0.05	-0.0040	0.0081	3.0217	0.1299	-0.8542	0.39258	-2.58103	0.002193	0.7296	-1.973906
0.06	-0.0055	0.0085	3.1715	0.1270	-1.0176	0.402823	-3.227152	0.002049	1.0354	-2.750957
0.07	-0.0071	0.0089	3.3213	0.1236	-1.1769	0.41053	-3.908887	0.001888	1.3851	-3.528008
0.08	-0.0083	0.0073	2.7221	0.1197	-1.3316	0.325859	-3.624827	0.001715	1.7733	-4.110796
0.09	-0.0094	0.0077	2.8719	0.1153	-1.4811	0.331246	-4.25356	0.001534	2.1937	-4.693584
0.1	-0.0083	0.0081	3.0217	0.1105	-1.6247	0.333948	-4.909412	0.001350	2.6397	-4.110796
0.11	-0.0008	0.0061	2.2727	0.1053	-1.7619	0.239215	-4.004295	0.001166	3.1044	-0.419804
0.12	-0.0094	0.0061	2.2727	0.0996	-1.8922	0.226317	-4.300322	0.000988	3.5804	-4.693584
0.13	-0.0090	0.0073	2.7221	0.0935	-2.0150	0.254552	-5.484929	0.000818	4.0601	-4.499321
0.14	-0.0040	0.0061	2.2727	0.0871	-2.1298	0.197896	-4.840361	0.000660	4.5361	-1.973906
0.15	-0.0051	0.0065	2.4225	0.0803	-2.2362	0.194514	-5.417238	0.000518	5.0008	-2.556694
0.16	-0.0051	0.0049	1.8233	0.0732	-2.3338	0.133458	-4.25521	0.000392	5.4468	-2.556694
0.17	-0.0075	0.0061	2.2727	0.0658	-2.4222	0.149566	-5.504955	0.000285	5.8672	-3.722271
0.18	-0.0087	0.0089	3.3213	0.0582	-2.5011	0.193181	-8.306808	0.000197	6.2554	-4.305059
0.19	-0.0087	0.0073	2.7221	0.0503	-2.5700	0.136889	-6.995854	0.000127	6.6051	-4.305059
0.2	-0.0071	0.0085	3.1715	0.0422	-2.6289	0.133881	-8.337407	0.000075	6.9109	-3.528008
0.21	-0.0051	0.0077	2.8719	0.0340	-2.6773	0.097566	-7.688914	0.000039	7.1680	-2.556694
0.22	-0.0083	0.0057	2.1229	0.0256	-2.7152	0.05434	-5.763981	0.000017	7.3722	-4.110796
0.23	-0.0008	0.0077	2.8719	0.0171	-2.7424	0.049171	-7.875715	0.000005	7.5205	-0.419804
0.24	-0.0090	0.0073	2.7221	0.0086	-2.7587	0.023349	-7.509385	0.000001	7.6104	-4.499321
0.25	-0.0075	0.0057	2.1229	0.0000	-2.7641	-1.11E-16	-5.867918	0.000000	7.6405	-3.722271
0.26	-0.0067	0.0069	2.5723	-0.0086	-2.7587	-0.022064	-7.096123	-0.000001	7.6104	-3.333745
0.27	-0.0044	0.0077	2.8719	-0.0171	-2.7424	-0.049171	-7.875715	-0.000005	7.5205	-2.168169
0.28	-0.0083	0.0121	4.5197	-0.0256	-2.7152	-0.115694	-12.27189	-0.000017	7.3722	-4.110796
0.29	-0.0063	0.0061	2.2727	-0.0340	-2.6773	-0.077209	-6.084636	-0.000039	7.1680	-3.139482
0.3	-0.0067	0.0093	3.4711	-0.0422	-2.6289	-0.146528	-9.125032	-0.000075	6.9109	-3.333745
0.31	-0.0048	0.0093	3.4711	-0.0503	-2.5700	-0.174556	-8.920858	-0.000127	6.6051	-2.362431
0.32	-0.0079	0.0069	2.5723	-0.0582	-2.5011	-0.149615	-6.433459	-0.000197	6.2554	-3.916533
0.33	-0.0075	0.0057	2.1229	-0.0658	-2.4222	-0.139708	-5.142096	-0.000285	5.8672	-3.722271
0.34	-0.0051	0.0073	2.7221	-0.0732	-2.3338	-0.19925	-6.352919	-0.000392	5.4468	-2.556694
0.35	-0.0102	0.0081	3.0217	-0.0803	-2.2362	-0.242628	-6.757225	-0.000518	5.0008	-5.08211
0.36	-0.0067	0.0081	3.0217	-0.0871	-2.1298	-0.263118	-6.435627	-0.000660	4.5361	-3.333745
0.37	-0.0071	0.0069	2.5723	-0.0935	-2.0150	-0.240543	-5.183079	-0.000818	4.0601	-3.528008
0.38	-0.0028	0.0057	2.1229	-0.0996	-1.8922	-0.211399	-4.016866	-0.000988	3.5804	-1.391118
0.39	-0.0071	0.0073	2.7221	-0.1053	-1.7619	-0.286519	-4.796126	-0.001166	3.1044	-3.528008
0.4	-0.0051	0.0073	2.7221	-0.1105	-1.6247	-0.300837	-4.422633	-0.001350	2.6397	-2.556694
0.41	-0.0083	0.0053	1.9731	-0.1153	-1.4811	-0.227575	-2.922313	-0.001534	2.1937	-4.110796
0.42	-0.0040	0.0077	2.8719	-0.1197	-1.3316	-0.343792	-3.824311	-0.001715	1.7733	-1.973906
0.43	-0.0087	0.0089	3.3213	-0.1236	-1.1769	-0.41053	-3.908887	-0.001888	1.3851	-4.305059
0.44	-0.0040	0.0069	2.5723	-0.1270	-1.0176	-0.326715	-2.617422	-0.002049	1.0354	-1.973906
0.45	-0.0071	0.0081	3.0217	-0.1299	-0.8542	-0.39258	-2.58103	-0.002193	0.7296	-3.528008
0.46	-0.0075	0.0069	2.5723	-0.1323	-0.6874	-0.340351	-1.768223	-0.002316	0.4725	-3.722271
0.47	-0.0044	0.0077	2.8719	-0.1342	-0.5179	-0.38537	-1.487491	-0.002416	0.2683	-2.168169
0.48	-0.0040	0.0061	2.2727	-0.1355	-0.3464	-0.308014	-0.787343	-0.002489	0.1200	-1.973906
0.49	-0.0063	0.0069	2.5723	-0.1363	-0.1736	-0.350697	-0.44645	-0.002534	0.0301	-3.139482
0.5	-0.0071	0.0085	3.1715	-0.1366	0.0000	-0.433247	1.06E-14	-0.002549	0.0000	-3.528008
0.51	-0.0051	0.0077	2.8719	-0.1363	0.1736	-0.391545	0.498451	-0.002534	0.0301	-2.556694
0.52	-0.0063	0.0053	1.9731	-0.1355	0.3464	-0.267408	0.683547	-0.002489	0.1200	-3.139482
0.53	-0.0059	0.0065	2.4225	-0.1342	0.5179	-0.325065	1.254719	-0.002416	0.2683	-2.94522
0.54	-0.0067	0.0089	3.3213	-0.1323	0.6874	-0.439457	2.283109	-0.002316	0.4725	-3.333745
0.55	-0.0063	0.0073	2.7221	-0.1299	0.8542	-0.353655	2.325116	-0.002193	0.7296	-3.139482
0.56	-0.0051	0.0081	3.0217	-0.1270	1.0176	-0.383796	3.07472	-0.002049	1.0354	-2.556694
0.57	-0.0048	0.0081	3.0217	-0.1236	1.1769	-0.373497	3.556275	-0.001888	1.3851	-2.362431
0.58	-0.0067	0.0121	4.5197	-0.1197	1.3316	-0.541053	6.018634	-0.001715	1.7733	-3.333745
0.59	-0.0063	0.0077	2.8719	-0.1153	1.4811	-0.331246	4.25356	-0.001534	2.1937	-3.139482
0.6	-0.0055	0.0073	2.7221	-0.1105	1.6247	-0.300837	4.422633	-0.001350	2.6397	-2.750957
0.61	-0.0051	0.0065	2.4225	-0.1053	1.7619	-0.254983	4.268239	-0.001166	3.1044	-2.556694
0.62	-0.0055	0.0077	2.8719	-0.0996	1.8922	-0.285988	5.434148	-0.000988	3.5804	-2.750957
0.63	-0.0040	0.0081	3.0217	-0.0935	2.0150	-0.282569	6.08863	-0.000818	4.0601	-1.973906
0.64	-0.0063	0.0057	2.1229	-0.0871	2.1298	-0.184852	4.521308	-0.000660	4.5361	-3.139482
0.65	-0.0059	0.0097	3.6209	-0.0803	2.2362	-0.290742	8.097212	-0.000518	5.0008	-2.94522

0.66	-0.0048	0.0073	2.7221	-0.0732	2.3338	-0.19925	6.352919	-0.000392	5.4468	-2.362431
0.67	-0.0028	0.0069	2.5723	-0.0658	2.4222	-0.169284	6.230675	-0.000285	5.8672	-1.391118
0.68	-0.0087	0.0085	3.1715	-0.0582	2.5011	-0.184468	7.932138	-0.000197	6.2554	-4.305059
0.69	-0.0036	0.0053	1.9731	-0.0503	2.5700	-0.099222	5.070851	-0.000127	6.6051	-1.779643
0.7	-0.0083	0.0057	2.1229	-0.0422	2.6289	-0.089614	5.580722	-0.000075	6.9109	-4.110796
0.71	-0.0048	0.0069	2.5723	-0.0340	2.6773	-0.087387	6.886775	-0.000039	7.1680	-2.362431
0.72	-0.0087	0.0073	2.7221	-0.0256	2.7152	-0.069679	7.390958	-0.000017	7.3722	-4.305059
0.73	-0.0130	0.0093	3.4711	-0.0171	2.7424	-0.05943	9.51897	-0.000005	7.5205	-6.441949
0.74	-0.0051	0.0077	2.8719	-0.0086	2.7587	-0.024634	7.922647	-0.000001	7.6104	-2.556694
0.75	-0.0063	0.0045	1.6735	0.0000	2.7641	5.67E-16	4.625682	0.000000	7.6405	-3.139482
0.76	-0.0048	0.0057	2.1229	0.0086	2.7587	0.018209	5.856339	0.000001	7.6104	-2.362431
0.77	-0.0055	0.0069	2.5723	0.0171	2.7424	0.044041	7.054088	0.000005	7.5205	-2.750957
0.78	-0.0055	0.0065	2.4225	0.0256	2.7152	0.062009	6.577469	0.000017	7.3722	-2.750957
0.79	-0.0051	0.0065	2.4225	0.0340	2.6773	0.082298	6.485705	0.000039	7.1680	-2.556694
0.8	-0.0028	0.0073	2.7221	0.0422	2.6289	0.114909	7.15597	0.000075	6.9109	-1.391118
0.81	-0.0048	0.0097	3.6209	0.0503	2.5700	0.182089	9.305858	0.000127	6.6051	-2.362431
0.82	-0.0075	0.0065	2.4225	0.0582	2.5011	0.140902	6.05879	0.000197	6.2554	-3.722271
0.83	-0.0012	0.0061	2.2727	0.0658	2.4222	0.149566	5.504955	0.000285	5.8672	-0.614067
0.84	-0.0090	0.0065	2.4225	0.0732	2.3338	0.177319	5.653683	0.000392	5.4468	-4.499321
0.85	-0.0087	0.0081	3.0217	0.0803	2.2362	0.242628	6.757225	0.000518	5.0008	-4.305059
0.86	-0.0071	0.0057	2.1229	0.0871	2.1298	0.184852	4.521308	0.000660	4.5361	-3.528008
0.87	-0.0079	0.0089	3.3213	0.0935	2.0150	0.310587	6.692331	0.000818	4.0601	-3.916533
0.88	-0.0012	0.0069	2.5723	0.0996	1.8922	0.256153	4.867235	0.000988	3.5804	-0.614067
0.89	-0.0090	0.0093	3.4711	0.1053	1.7619	0.365358	6.115845	0.001166	3.1044	-4.499321
0.9	-0.0020	0.0065	2.4225	0.1105	1.6247	0.267725	3.935854	0.001350	2.6397	-1.002592
0.91	-0.0044	0.0069	2.5723	0.1153	1.4811	0.296689	3.809811	0.001534	2.1937	-2.168169
0.92	-0.0059	0.0089	3.3213	0.1197	1.3316	0.39759	4.422762	0.001715	1.7733	-2.94522
0.93	-0.0051	0.0053	1.9731	0.1236	1.1769	0.243881	2.322132	0.001888	1.3851	-2.556694
0.94	-0.0071	0.0089	3.3213	0.1270	1.0176	0.42185	3.379585	0.002049	1.0354	-3.528008
0.95	-0.0059	0.0085	3.1715	0.1299	0.8542	0.412042	2.708988	0.002193	0.7296	-2.94522
0.96	-0.0063	0.0081	3.0217	0.1323	0.6874	0.399815	2.077155	0.002316	0.4725	-3.139482
0.97	-0.0055	0.0069	2.5723	0.1342	0.5179	0.345166	1.33231	0.002416	0.2683	-2.750957
0.98	-0.0059	0.0089	3.3213	0.1355	0.3464	0.450134	1.150628	0.002489	0.1200	-2.94522
0.99	-0.0075	0.0057	2.1229	0.1363	0.1736	0.289426	0.36845	0.002534	0.0301	-3.722271
1	-0.0051	0.0081	3.0217	0.1366	0.0000	0.412783	-3.5E-14	0.002549	0.0000	-2.556694
1.01	-0.0032	0.0081	3.0217	0.1363	-0.1736	0.411968	-0.524451	0.002534	0.0301	-1.58538
1.02	-0.0079	0.0081	3.0217	0.1355	-0.3464	0.409528	-1.046832	0.002489	0.1200	-3.916533
1.03	-0.0083	0.0097	3.6209	0.1342	-0.5179	0.485878	-1.875444	0.002416	0.2683	-4.110796
1.04	-0.0059	0.0077	2.8719	0.1323	-0.6874	0.379993	-1.974178	0.002316	0.4725	-2.94522
1.05	-0.0063	0.0077	2.8719	0.1299	-0.8542	0.373117	-2.453073	0.002193	0.7296	-3.139482
1.06	-0.0067	0.0069	2.5723	0.1270	-1.0176	0.326715	-2.617422	0.002049	1.0354	-3.333745
1.07	-0.0032	0.0073	2.7221	0.1236	-1.1769	0.336464	-3.203662	0.001888	1.3851	-1.58538
1.08	-0.0106	0.0081	3.0217	0.1197	-1.3316	0.361724	-4.023794	0.001715	1.7733	-5.276373
1.09	-0.0059	0.0073	2.7221	0.1153	-1.4811	0.313967	-4.031685	0.001534	2.1937	-2.94522
1.1	-0.0059	0.0057	2.1229	0.1105	-1.6247	0.234613	-3.449076	0.001350	2.6397	-2.94522
1.11	-0.0059	0.0077	2.8719	0.1053	-1.7619	0.302287	-5.06007	0.001166	3.1044	-2.94522
1.12	-0.0048	0.0077	2.8719	0.0996	-1.8922	0.285988	-5.434148	0.000988	3.5804	-2.362431
1.13	-0.0048	0.0089	3.3213	0.0935	-2.0150	0.310587	-6.692331	0.000818	4.0601	-2.362431
1.14	-0.0094	0.0073	2.7221	0.0871	-2.1298	0.237029	-5.797521	0.000660	4.5361	-4.693584
1.15	-0.0079	0.0065	2.4225	0.0803	-2.2362	0.194514	-5.417238	0.000518	5.0008	-3.916533
1.16	-0.0055	0.0069	2.5723	0.0732	-2.3338	0.188284	-6.003301	0.000392	5.4468	-2.750957
1.17	-0.0055	0.0089	3.3213	0.0658	-2.4222	0.218577	-8.044975	0.000285	5.8672	-2.750957
1.18	-0.0079	0.0081	3.0217	0.0582	-2.5011	0.175754	-7.557468	0.000197	6.2554	-3.916533
1.19	-0.0048	0.0069	2.5723	0.0503	-2.5700	0.129355	-6.610854	0.000127	6.6051	-2.362431
1.2	-0.0075	0.0073	2.7221	0.0422	-2.6289	0.114909	-7.15597	0.000075	6.9109	-3.722271
1.21	-0.0110	0.0077	2.8719	0.0340	-2.6773	0.097566	-7.688914	0.000039	7.1680	-5.470635
1.22	-0.0063	0.0073	2.7221	0.0256	-2.7152	0.069679	-7.390958	0.000017	7.3722	-3.139482
1.23	-0.0087	0.0073	2.7221	0.0171	-2.7424	0.046606	-7.464902	0.000005	7.5205	-4.305059
1.24	-0.0102	0.0089	3.3213	0.0086	-2.7587	0.028489	-9.162432	0.000001	7.6104	-5.08211
1.25	-0.0059	0.0077	2.8719	0.0000	-2.7641	-1.97E-15	-7.938311	0.000000	7.6405	-2.94522
1.26	-0.0055	0.0073	2.7221	-0.0086	-2.7587	-0.023349	-7.509385	-0.000001	7.6104	-2.750957
1.27	-0.0040	0.0081	3.0217	-0.0171	-2.7424	-0.051735	-8.286529	-0.000005	7.5205	-1.973906
1.28	-0.0075	0.0081	3.0217	-0.0256	-2.7152	-0.077348	-8.204446	-0.000017	7.3722	-3.722271
1.29	-0.0036	0.0097	3.6209	-0.0340	-2.6773	-0.123012	-9.694263	-0.000039	7.1680	-1.779643
1.3	-0.0044	0.0081	3.0217	-0.0422	-2.6289	-0.127557	-7.943595	-0.000075	6.9109	-2.168169
1.31	-0.0075	0.0069	2.5723	-0.0503	-2.5700	-0.129355	-6.610854	-0.000127	6.6051	-3.722271
1.32	-0.0024	0.0077	2.8719	-0.0582	-2.5011	-0.167041	-7.182799	-0.000197	6.2554	-1.196855
1.33	-0.0098	0.0081	3.0217	-0.0658	-2.4222	-0.19886	-7.319255	-0.000285	5.8672	-4.887847
1.34	-0.0067	0.0065	2.4225	-0.0732	-2.3338	-0.177319	-5.653683	-0.000392	5.4468	-3.333745
1.35	-0.0051	0.0053	1.9731	-0.0803	-2.2362	-0.158428	-4.412249	-0.000518	5.0008	-2.556694
1.36	-0.0048	0.0077	2.8719	-0.0871	-2.1298	-0.250073	-6.116574	-0.000660	4.5361	-2.362431

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1.37	-0.0063	0.0077	2.8719	-0.0935	-2.0150	-0.268561	-5.78678	-0.000818	4.0601	-3.139482
1.38	-0.0102	0.0077	2.8719	-0.0996	-1.8922	-0.285988	-5.434148	-0.000988	3.5804	-5.08211
1.39	-0.0067	0.0077	2.8719	-0.1053	-1.7619	-0.302287	-5.06007	-0.001166	3.1044	-3.333745
1.4	-0.0059	0.0077	2.8719	-0.1105	-1.6247	-0.317393	-4.666022	-0.001350	2.6397	-2.94522
1.41	-0.0071	0.0085	3.1715	-0.1153	-1.4811	-0.365803	-4.697309	-0.001534	2.1937	-3.528008
1.42	-0.0044	0.0077	2.8719	-0.1197	-1.3316	-0.343792	-3.824311	-0.001715	1.7733	-2.168169
1.43	-0.0079	0.0073	2.7221	-0.1236	-1.1769	-0.336464	-3.203662	-0.001888	1.3851	-3.916533
1.44	-0.0067	0.0101	3.7707	-0.1270	-1.0176	-0.478931	-3.836883	-0.002049	1.0354	-3.333745
1.45	-0.0051	0.0045	1.6735	-0.1299	-0.8542	-0.217417	-1.429414	-0.002193	0.7296	-2.556694
1.46	-0.0067	0.0077	2.8719	-0.1323	-0.6874	-0.379993	-1.974178	-0.002316	0.4725	-3.333745
1.47	-0.0040	0.0077	2.8719	-0.1342	-0.5179	-0.38537	-1.487491	-0.002416	0.2683	-1.973906
1.48	-0.0071	0.0057	2.1229	-0.1355	-0.3464	-0.287711	-0.735445	-0.002489	0.1200	-3.528008
1.49	-0.0087	0.0081	3.0217	-0.1363	-0.1736	-0.411968	-0.524451	-0.002534	0.0301	-4.305059
1.5	-0.0016	0.0089	3.3213	-0.1366	0.0000	-0.453711	6.19E-14	-0.002549	0.0000	-0.808329
1.51	-0.0044	0.0057	2.1229	-0.1363	0.1736	-0.289426	0.36845	-0.002534	0.0301	-2.168169
1.52	-0.0079	0.0053	1.9731	-0.1355	0.3464	-0.267408	0.683547	-0.002489	0.1200	-3.916533
1.53	-0.0067	0.0085	3.1715	-0.1342	0.5179	-0.425573	1.642672	-0.002416	0.2683	-3.333745
1.54	-0.0055	0.0073	2.7221	-0.1323	0.6874	-0.360172	1.8712	-0.002316	0.4725	-2.750957
1.55	-0.0040	0.0093	3.4711	-0.1299	0.8542	-0.450968	2.964902	-0.002193	0.7296	-1.973906
1.56	-0.0067	0.0053	1.9731	-0.1270	1.0176	-0.250606	2.007692	-0.002049	1.0354	-3.333745
1.57	-0.0051	0.0065	2.4225	-0.1236	1.1769	-0.299431	2.85105	-0.001888	1.3851	-2.556694
1.58	-0.0083	0.0093	3.4711	-0.1197	1.3316	-0.415523	4.622246	-0.001715	1.7733	-4.110796
1.59	-0.0055	0.0061	2.2727	-0.1153	1.4811	-0.262132	3.366062	-0.001534	2.1937	-2.750957
1.6	-0.0059	0.0081	3.0217	-0.1105	1.6247	-0.333948	4.909412	-0.001350	2.6397	-2.94522
1.61	-0.0044	0.0089	3.3213	-0.1053	1.7619	-0.349591	5.851901	-0.001166	3.1044	-2.168169
1.62	-0.0083	0.0085	3.1715	-0.0996	1.8922	-0.315824	6.001061	-0.000988	3.5804	-4.110796
1.63	-0.0059	0.0069	2.5723	-0.0935	2.0150	-0.240543	5.183079	-0.000818	4.0601	-2.94522
1.64	-0.0063	0.0093	3.4711	-0.0871	2.1298	-0.302251	7.392786	-0.000660	4.5361	-3.139482
1.65	-0.0040	0.0077	2.8719	-0.0803	2.2362	-0.230599	6.422229	-0.000518	5.0008	-1.973906
1.66	-0.0059	0.0077	2.8719	-0.0732	2.3338	-0.210215	6.702538	-0.000392	5.4468	-2.94522
1.67	-0.0110	0.0089	3.3213	-0.0658	2.4222	-0.218577	8.044975	-0.000285	5.8672	-5.470635
1.68	-0.0059	0.0077	2.8719	-0.0582	2.5011	-0.167041	7.182799	-0.000197	6.2554	-2.94522
1.69	-0.0028	0.0037	1.3739	-0.0503	2.5700	-0.069089	3.530849	-0.000127	6.6051	-1.391118
1.7	-0.0071	0.0093	3.4711	-0.0422	2.6289	-0.146528	9.125032	-0.000075	6.9109	-3.528008
1.71	-0.0079	0.0065	2.4225	-0.0340	2.6773	-0.082298	6.485705	-0.000039	7.1680	-3.916533
1.72	-0.0083	0.0093	3.4711	-0.0256	2.7152	-0.088852	9.424679	-0.000017	7.3722	-4.110796
1.73	-0.0075	0.0077	2.8719	-0.0171	2.7424	-0.049171	7.875715	-0.000005	7.5205	-3.722271
1.74	-0.0059	0.0097	3.6209	-0.0086	2.7587	-0.031059	9.988955	-0.000001	7.6104	-2.94522
1.75	-0.0055	0.0069	2.5723	0.0000	2.7641	2.97E-15	7.110154	0.000000	7.6405	-2.750957
1.76	-0.0067	0.0113	4.2201	0.0086	2.7587	0.036198	11.642	0.000001	7.6104	-3.333745
1.77	-0.0055	0.0073	2.7221	0.0171	2.7424	0.046606	7.464902	0.000005	7.5205	-2.750957
1.78	-0.0055	0.0081	3.0217	0.0256	2.7152	0.077348	8.204446	0.000017	7.3722	-2.750957
1.79	-0.0083	0.0069	2.5723	0.0340	2.6773	0.087387	6.886775	0.000039	7.1680	-4.110796
1.8	-0.0055	0.0065	2.4225	0.0422	2.6289	0.102262	6.368346	0.000075	6.9109	-2.750957
1.81	-0.0040	0.0089	3.3213	0.0503	2.5700	0.167022	8.535857	0.000127	6.6051	-1.973906
1.82	-0.0083	0.0093	3.4711	0.0582	2.5011	0.201894	8.681477	0.000197	6.2554	-4.110796
1.83	-0.0048	0.0065	2.4225	0.0658	2.4222	0.159425	5.867815	0.000285	5.8672	-2.362431
1.84	-0.0055	0.0089	3.3213	0.0732	2.3338	0.243111	7.751392	0.000392	5.4468	-2.750957
1.85	-0.0106	0.0081	3.0217	0.0803	2.2362	0.242628	6.757225	0.000518	5.0008	-5.276373
1.86	-0.0075	0.0069	2.5723	0.0871	2.1298	0.223985	5.478468	0.000660	4.5361	-3.722271
1.87	-0.0048	0.0093	3.4711	0.0935	2.0150	0.324595	6.994181	0.000818	4.0601	-2.362431
1.88	-0.0079	0.0077	2.8719	0.0996	1.8922	0.285988	5.434148	0.000988	3.5804	-3.916533
1.89	-0.0044	0.0069	2.5723	0.1053	1.7619	0.270751	4.532182	0.001166	3.1044	-2.168169
1.9	-0.0055	0.0077	2.8719	0.1105	1.6247	0.317393	4.666022	0.001350	2.6397	-2.750957
1.91	-0.0059	0.0081	3.0217	0.1153	1.4811	0.348524	4.475434	0.001534	2.1937	-2.94522
1.92	-0.0075	0.0097	3.6209	0.1197	1.3316	0.433456	4.82173	0.001715	1.7733	-3.722271
1.93	-0.0063	0.0065	2.4225	0.1236	1.1769	0.299431	2.85105	0.001888	1.3851	-3.139482
1.94	-0.0063	0.0065	2.4225	0.1270	1.0176	0.307687	2.46499	0.002049	1.0354	-3.139482
1.95	-0.0063	0.0065	2.4225	0.1299	0.8542	0.31473	2.069201	0.002193	0.7296	-3.139482
1.96	-0.0083	0.0073	2.7221	0.1323	0.6874	0.360172	1.8712	0.002316	0.4725	-4.110796
1.97	-0.0055	0.0057	2.1229	0.1342	0.5179	0.284861	1.099538	0.002416	0.2683	-2.750957
1.98	-0.0087	0.0093	3.4711	0.1355	0.3464	0.470436	1.202526	0.002489	0.1200	-4.305059
1.99	-0.0036	0.0061	2.2727	0.1363	0.1736	0.309849	0.39445	0.002534	0.0301	-1.779643
2	-0.0071	0.0077	2.8719	0.1366	0.0000	0.392319	-6.66E-14	0.002549	0.0000	-3.528008
2.01	-0.0059	0.0049	1.8233	0.1363	-0.1736	0.248578	-0.316449	0.002534	0.0301	-2.94522
2.02	-0.0055	0.0081	3.0217	0.1355	-0.3464	0.409528	-1.046832	0.002489	0.1200	-2.750957
2.03	-0.0048	0.0081	3.0217	0.1342	-0.5179	0.405471	-1.565082	0.002416	0.2683	-2.362431
2.04	-0.0090	0.0081	3.0217	0.1323	-0.6874	0.399815	-2.077155	0.002316	0.4725	-4.499321
2.05	-0.0083	0.0069	2.5723	0.1299	-0.8542	0.334192	-2.197158	0.002193	0.7296	-4.110796
2.06	-0.0075	0.0085	3.1715	0.1270	-1.0176	0.402823	-3.227152	0.002049	1.0354	-3.722271
2.07	-0.0048	0.0061	2.2727	0.1236	-1.1769	0.280915	-2.674744	0.001888	1.3851	-2.362431

2.08	-0.0071	0.0065	2.4225	0.1197	-1.3316	0.289993	-3.225859	0.001715	1.7733	-3.528008
2.09	-0.0071	0.0085	3.1715	0.1153	-1.4811	0.365803	-4.697309	0.001534	2.1937	-3.528008
2.1	-0.0028	0.0069	2.5723	0.1105	-1.6247	0.284281	-4.179243	0.001350	2.6397	-1.391118
2.11	-0.0094	0.0093	3.4711	0.1053	-1.7619	0.365358	-6.115845	0.001166	3.1044	-4.693584
2.12	-0.0067	0.0077	2.8719	0.0996	-1.8922	0.285988	-5.434148	0.000988	3.5804	-3.333745
2.13	-0.0094	0.0065	2.4225	0.0935	-2.0150	0.226535	-4.881229	0.000818	4.0601	-4.693584
2.14	-0.0044	0.0081	3.0217	0.0871	-2.1298	0.263118	-6.435627	0.000660	4.5361	-2.168169
2.15	-0.0141	0.0045	1.6735	0.0803	-2.2362	0.134371	-3.742255	0.000518	5.0008	-7.024737
2.16	-0.0055	0.0049	1.8233	0.0732	-2.3338	0.133458	-4.25521	0.000392	5.4468	-2.750957
2.17	-0.0063	0.0061	2.2727	0.0658	-2.4222	0.149566	-5.504955	0.000285	5.8672	-3.139482
2.18	-0.0063	0.0057	2.1229	0.0582	-2.5011	0.123475	-5.309451	0.000197	6.2554	-3.139482
2.19	-0.0079	0.0069	2.5723	0.0503	-2.5700	0.129355	-6.610854	0.000127	6.6051	-3.916533
2.2	-0.0075	0.0081	3.0217	0.0422	-2.6289	0.127557	-7.943595	0.000075	6.9109	-3.722271
2.21	-0.0059	0.0073	2.7221	0.0340	-2.6773	0.092476	-7.287845	0.000039	7.1680	-2.94522
2.22	-0.0071	0.0061	2.2727	0.0256	-2.7152	0.058175	-6.170725	0.000017	7.3722	-3.528008
2.23	-0.0098	0.0065	2.4225	0.0171	-2.7424	0.041476	-6.643274	0.000005	7.5205	-4.887847
2.24	-0.0059	0.0081	3.0217	0.0086	-2.7587	0.025919	-8.335908	0.000001	7.6104	-2.94522
2.25	-0.0067	0.0069	2.5723	0.0000	-2.7641	8.93E-15	-7.110154	0.000000	7.6405	-3.333745
2.26	-0.0040	0.0069	2.5723	-0.0086	-2.7587	-0.022064	-7.096123	-0.000001	7.6104	-1.973906
2.27	-0.0067	0.0073	2.7221	-0.0171	-2.7424	-0.046606	-7.464902	-0.000005	7.5205	-3.333745
2.28	-0.0071	0.0061	2.2727	-0.0256	-2.7152	-0.058175	-6.170725	-0.000017	7.3722	-3.528008
2.29	-0.0048	0.0081	3.0217	-0.0340	-2.6773	-0.102655	-8.089984	-0.000039	7.1680	-2.362431
2.3	-0.0051	0.0073	2.7221	-0.0422	-2.6289	-0.114909	-7.15597	-0.000075	6.9109	-2.556694
2.31	-0.0048	0.0061	2.2727	-0.0503	-2.5700	-0.114289	-5.840852	-0.000127	6.6051	-2.362431
2.32	-0.0051	0.0081	3.0217	-0.0582	-2.5011	-0.175754	-7.557468	-0.000197	6.2554	-2.556694
2.33	-0.0075	0.0085	3.1715	-0.0658	-2.4222	-0.208718	-7.682115	-0.000285	5.8672	-3.722271
2.34	-0.0032	0.0053	1.9731	-0.0732	-2.3338	-0.144423	-4.604829	-0.000392	5.4468	-1.58538
2.35	-0.0051	0.0073	2.7221	-0.0803	-2.2362	-0.218571	-6.087232	-0.000518	5.0008	-2.556694
2.36	-0.0048	0.0069	2.5723	-0.0871	-2.1298	-0.223985	-5.478468	-0.000660	4.5361	-2.362431
2.37	-0.0051	0.0089	3.3213	-0.0935	-2.0150	-0.310587	-6.692331	-0.000818	4.0601	-2.556694
2.38	-0.0087	0.0081	3.0217	-0.0996	-1.8922	-0.300906	-5.717604	-0.000988	3.5804	-4.305059
2.39	-0.0090	0.0109	4.0703	-0.1053	-1.7619	-0.42843	-7.17162	-0.001166	3.1044	-4.499321
2.4	-0.0079	0.0069	2.5723	-0.1105	-1.6247	-0.284281	-4.179243	-0.001350	2.6397	-3.916533
2.41	-0.0044	0.0045	1.6735	-0.1153	-1.4811	-0.193018	-2.478564	-0.001534	2.1937	-2.168169
2.42	-0.0075	0.0069	2.5723	-0.1197	-1.3316	-0.307926	-3.425343	-0.001715	1.7733	-3.722271
2.43	-0.0051	0.0069	2.5723	-0.1236	-1.1769	-0.317948	-3.027356	-0.001888	1.3851	-2.556694
2.44	-0.0044	0.0077	2.8719	-0.1270	-1.0176	-0.364769	-2.922287	-0.002049	1.0354	-2.168169
2.45	-0.0044	0.0065	2.4225	-0.1299	-0.8542	-0.31473	-2.069201	-0.002193	0.7296	-2.168169
2.46	-0.0087	0.0053	1.9731	-0.1323	-0.6874	-0.261066	-1.356315	-0.002316	0.4725	-4.305059
2.47	-0.0094	0.0097	3.6209	-0.1342	-0.5179	-0.485878	-1.875444	-0.002416	0.2683	-4.693584
2.48	-0.0094	0.0057	2.1229	-0.1355	-0.3464	-0.287711	-0.735445	-0.002489	0.1200	-4.693584
2.49	-0.0051	0.0073	2.7221	-0.1363	-0.1736	-0.371121	-0.47245	-0.002534	0.0301	-2.556694
2.5	-0.0067	0.0073	2.7221	-0.1366	0.0000	-0.371855	-4.46E-13	-0.002549	0.0000	-3.333745
2.51	-0.0083	0.0077	2.8719	-0.1363	0.1736	-0.391545	0.498451	-0.002534	0.0301	-4.110796
2.52	-0.0059	0.0065	2.4225	-0.1355	0.3464	-0.328317	0.839241	-0.002489	0.1200	-2.94522
2.53	-0.0075	0.0069	2.5723	-0.1342	0.5179	-0.345166	1.33231	-0.002416	0.2683	-3.722271
2.54	-0.0055	0.0081	3.0217	-0.1323	0.6874	-0.399815	2.077155	-0.002316	0.4725	-2.750957
2.55	-0.0051	0.0065	2.4225	-0.1299	0.8542	-0.31473	2.069201	-0.002193	0.7296	-2.556694
2.56	-0.0044	0.0057	2.1229	-0.1270	1.0176	-0.269633	2.160125	-0.002049	1.0354	-2.168169
2.57	-0.0028	0.0085	3.1715	-0.1236	1.1769	-0.392014	3.732581	-0.001888	1.3851	-1.391118
2.58	-0.0090	0.0069	2.5723	-0.1197	1.3316	-0.307926	3.425343	-0.001715	1.7733	-4.499321
2.59	-0.0055	0.0093	3.4711	-0.1153	1.4811	-0.40036	5.141058	-0.001534	2.1937	-2.750957
2.6	-0.0055	0.0081	3.0217	-0.1105	1.6247	-0.333948	4.909412	-0.001350	2.6397	-2.750957
2.61	-0.0036	0.0065	2.4225	-0.1053	1.7619	-0.254983	4.268239	-0.001166	3.1044	-1.779643
2.62	-0.0044	0.0101	3.7707	-0.0996	1.8922	-0.375494	7.134886	-0.000988	3.5804	-2.168169
2.63	-0.0048	0.0073	2.7221	-0.0935	2.0150	-0.254552	5.484929	-0.000818	4.0601	-2.362431
2.64	-0.0079	0.0069	2.5723	-0.0871	2.1298	-0.223985	5.478468	-0.000660	4.5361	-3.916533
2.65	-0.0059	0.0073	2.7221	-0.0803	2.2362	-0.218571	6.087232	-0.000518	5.0008	-2.94522
2.66	-0.0008	0.0061	2.2727	-0.0732	2.3338	-0.166354	5.304065	-0.000392	5.4468	-0.419804
2.67	-0.0059	0.0081	3.0217	-0.0658	2.4222	-0.19886	7.319255	-0.000285	5.8672	-2.94522
2.68	-0.0110	0.0077	2.8719	-0.0582	2.5011	-0.167041	7.182799	-0.000197	6.2554	-5.470635
2.69	-0.0048	0.0049	1.8233	-0.0503	2.5700	-0.091689	4.685851	-0.000127	6.6051	-2.362431
2.7	-0.0044	0.0077	2.8719	-0.0422	2.6289	-0.121233	7.549782	-0.000075	6.9109	-2.168169
2.71	-0.0063	0.0057	2.1229	-0.0340	2.6773	-0.07212	5.683566	-0.000039	7.1680	-3.139482
2.72	-0.0055	0.0077	2.8719	-0.0256	2.7152	-0.073513	7.797702	-0.000017	7.3722	-2.750957
2.73	-0.0048	0.0073	2.7221	-0.0171	2.7424	-0.046606	7.464902	-0.000005	7.5205	-2.362431
2.74	-0.0055	0.0085	3.1715	-0.0086	2.7587	-0.027204	8.74917	-0.000001	7.6104	-2.750957
2.75	-0.0048	0.0069	2.5723	0.0000	2.7641	-3.21E-14	7.110154	0.000000	7.6405	-2.362431
2.76	-0.0055	0.0081	3.0217	0.0086	2.7587	0.025919	8.335908	0.000001	7.6104	-2.750957
2.77	-0.0071	0.0061	2.2727	0.0171	2.7424	0.038911	6.232461	0.000005	7.5205	-3.528008
2.78	-0.0055	0.0081	3.0217	0.0256	2.7152	0.077348	8.204446	0.000017	7.3722	-2.750957

2.79	-0.0075	0.0049	1.8233	0.0340	2.6773	0.061941	4.881427	0.000039	7.1680	-3.722271
2.8	-0.0040	0.0069	2.5723	0.0422	2.6289	0.108586	6.762158	0.000075	6.9109	-1.973906
2.81	-0.0071	0.0065	2.4225	0.0503	2.5700	0.121822	6.225853	0.000127	6.6051	-3.528008
2.82	-0.0063	0.0053	1.9731	0.0582	2.5011	0.114762	4.934781	0.000197	6.2554	-3.139482
2.83	-0.0055	0.0073	2.7221	0.0658	2.4222	0.179142	6.593535	0.000285	5.8672	-2.750957
2.84	-0.0071	0.0077	2.8719	0.0732	2.3338	0.210215	6.702538	0.000392	5.4468	-3.528008
2.85	-0.0063	0.0069	2.5723	0.0803	2.2362	0.206542	5.752235	0.000518	5.0008	-3.139482
2.86	-0.0044	0.0081	3.0217	0.0871	2.1298	0.263118	6.435627	0.000660	4.5361	-2.168169
2.87	-0.0067	0.0073	2.7221	0.0935	2.0150	0.254552	5.484929	0.000818	4.0601	-3.333745
2.88	-0.0028	0.0081	3.0217	0.0996	1.8922	0.300906	5.717604	0.000988	3.5804	-1.391118
2.89	-0.0063	0.0101	3.7707	0.1053	1.7619	0.396894	6.643732	0.001166	3.1044	-3.139482
2.9	-0.0071	0.0073	2.7221	0.1105	1.6247	0.300837	4.422633	0.001350	2.6397	-3.528008
2.91	-0.0044	0.0089	3.3213	0.1153	1.4811	0.383081	4.919183	0.001534	2.1937	-2.168169
2.92	-0.0036	0.0085	3.1715	0.1197	1.3316	0.379657	4.223278	0.001715	1.7733	-1.779643
2.93	-0.0083	0.0077	2.8719	0.1236	1.1769	0.354981	3.379968	0.001888	1.3851	-4.110796
2.94	-0.0055	0.0069	2.5723	0.1270	1.0176	0.326715	2.617422	0.002049	1.0354	-2.750957
2.95	-0.0059	0.0073	2.7221	0.1299	0.8542	0.353655	2.325116	0.002193	0.7296	-2.94522
2.96	-0.0020	0.0061	2.2727	0.1323	0.6874	0.300708	1.562269	0.002316	0.4725	-1.002592
2.97	-0.0059	0.0065	2.4225	0.1342	0.5179	0.325065	1.254719	0.002416	0.2683	-2.94522
2.98	-0.0024	0.0065	2.4225	0.1355	0.3464	0.328317	0.839241	0.002489	0.1200	-1.196855
2.99	-0.0090	0.0081	3.0217	0.1363	0.1736	0.411968	0.524451	0.002534	0.0301	-4.499321
3	-0.0048	0.0061	2.2727	0.1366	0.0000	0.310462	7.86E-13	0.002549	0.0000	-2.362431
3.01	-0.0044	0.0081	3.0217	0.1363	-0.1736	0.411968	-0.524451	0.002534	0.0301	-2.168169
3.02	-0.0063	0.0069	2.5723	0.1355	-0.3464	0.34862	-0.891139	0.002489	0.1200	-3.139482
3.03	-0.0055	0.0061	2.2727	0.1342	-0.5179	0.304963	-1.177129	0.002416	0.2683	-2.750957
3.04	-0.0063	0.0049	1.8233	0.1323	-0.6874	0.241245	-1.253337	0.002316	0.4725	-3.139482
3.05	-0.0055	0.0081	3.0217	0.1299	-0.8542	0.39258	-2.58103	0.002193	0.7296	-2.750957
3.06	-0.0083	0.0069	2.5723	0.1270	-1.0176	0.326715	-2.617422	0.002049	1.0354	-4.110796
3.07	-0.0098	0.0073	2.7221	0.1236	-1.1769	0.336464	-3.203662	0.001888	1.3851	-4.887847
3.08	-0.0071	0.0073	2.7221	0.1197	-1.3316	0.325859	-3.624827	0.001715	1.7733	-3.528008
3.09	-0.0040	0.0093	3.4711	0.1153	-1.4811	0.40036	-5.141058	0.001534	2.1937	-1.973906
3.1	-0.0071	0.0073	2.7221	0.1105	-1.6247	0.300837	-4.422633	0.001350	2.6397	-3.528008
3.11	-0.0067	0.0069	2.5723	0.1053	-1.7619	0.270751	-4.532182	0.001166	3.1044	-3.333745
3.12	-0.0079	0.0065	2.4225	0.0996	-1.8922	0.241235	-4.583779	0.000988	3.5804	-3.916533
3.13	-0.0032	0.0057	2.1229	0.0935	-2.0150	0.198517	-4.277528	0.000818	4.0601	-1.58538
3.14	-0.0067	0.0081	3.0217	0.0871	-2.1298	0.263118	-6.435627	0.000660	4.5361	-3.333745
3.15	-0.0083	0.0085	3.1715	0.0803	-2.2362	0.254656	-7.092222	0.000518	5.0008	-4.110796
3.16	-0.0048	0.0109	4.0703	0.0732	-2.3338	0.297937	-9.499484	0.000392	5.4468	-2.362431
3.17	-0.0071	0.0069	2.5723	0.0658	-2.4222	0.169284	-6.230675	0.000285	5.8672	-3.528008
3.18	-0.0048	0.0057	2.1229	0.0582	-2.5011	0.123475	-5.309451	0.000197	6.2554	-2.362431
3.19	-0.0075	0.0073	2.7221	0.0503	-2.5700	0.136889	-6.995854	0.000127	6.6051	-3.722271
3.2	-0.0028	0.0093	3.4711	0.0422	-2.6289	0.146528	-9.125032	0.000075	6.9109	-1.391118
3.21	-0.0051	0.0069	2.5723	0.0340	-2.6773	0.087387	-6.886775	0.000039	7.1680	-2.556694
3.22	-0.0051	0.0073	2.7221	0.0256	-2.7152	0.069679	-7.390958	0.000017	7.3722	-2.556694
3.23	-0.0055	0.0077	2.8719	0.0171	-2.7424	0.049171	-7.875715	0.000005	7.5205	-2.750957
3.24	-0.0063	0.0065	2.4225	0.0086	-2.7587	0.020779	-6.682862	0.000001	7.6104	-3.139482
3.25	-0.0102	0.0089	3.3213	0.0000	-2.7641	7.21E-14	-9.180547	0.000000	7.6405	-5.08211
3.26	-0.0059	0.0061	2.2727	-0.0086	-2.7587	-0.019494	-6.2696	-0.000001	7.6104	-2.94522
3.27	-0.0071	0.0061	2.2727	-0.0171	-2.7424	-0.038911	-6.232461	-0.000005	7.5205	-3.528008
3.28	-0.0079	0.0081	3.0217	-0.0256	-2.7152	-0.077348	-8.204446	-0.000017	7.3722	-3.916533
3.29	-0.0044	0.0081	3.0217	-0.0340	-2.6773	-0.102655	-8.089984	-0.000039	7.1680	-2.168169
3.3	-0.0036	0.0093	3.4711	-0.0422	-2.6289	-0.146528	-9.125032	-0.000075	6.9109	-1.779643
3.31	-0.0048	0.0069	2.5723	-0.0503	-2.5700	-0.129355	-6.610854	-0.000127	6.6051	-2.362431
3.32	-0.0075	0.0081	3.0217	-0.0582	-2.5011	-0.175754	-7.557468	-0.000197	6.2554	-3.722271
3.33	-0.0048	0.0089	3.3213	-0.0658	-2.4222	-0.218577	-8.044975	-0.000285	5.8672	-2.362431
3.34	-0.0059	0.0061	2.2727	-0.0732	-2.3338	-0.166354	-5.304065	-0.000392	5.4468	-2.94522
3.35	-0.0048	0.0065	2.4225	-0.0803	-2.2362	-0.194514	-5.417238	-0.000518	5.0008	-2.362431
3.36	-0.0071	0.0065	2.4225	-0.0871	-2.1298	-0.21094	-5.159414	-0.000660	4.5361	-3.528008
3.37	-0.0051	0.0065	2.4225	-0.0935	-2.0150	-0.226535	-4.881229	-0.000818	4.0601	-2.556694
3.38	-0.0063	0.0069	2.5723	-0.0996	-1.8922	-0.256153	-4.867235	-0.000988	3.5804	-3.139482
3.39	-0.0048	0.0065	2.4225	-0.1053	-1.7619	-0.254983	-4.268239	-0.001166	3.1044	-2.362431
3.4	-0.0083	0.0077	2.8719	-0.1105	-1.6247	-0.317393	-4.666022	-0.001350	2.6397	-4.110796
3.41	-0.0044	0.0073	2.7221	-0.1153	-1.4811	-0.313967	-4.031685	-0.001534	2.1937	-2.168169
3.42	-0.0040	0.0089	3.3213	-0.1197	-1.3316	-0.39759	-4.422762	-0.001715	1.7733	-1.973906
3.43	-0.0067	0.0101	3.7707	-0.1236	-1.1769	-0.46608	-4.437805	-0.001888	1.3851	-3.333745
3.44	-0.0040	0.0093	3.4711	-0.1270	-1.0176	-0.440877	-3.532017	-0.002049	1.0354	-1.973906
3.45	-0.0083	0.0089	3.3213	-0.1299	-0.8542	-0.431505	-2.836945	-0.002193	0.7296	-4.110796
3.46	-0.0051	0.0081	3.0217	-0.1323	-0.6874	-0.399815	-2.077155	-0.002316	0.4725	-2.556694
3.47	-0.0036	0.0089	3.3213	-0.1342	-0.5179	-0.445675	-1.720263	-0.002416	0.2683	-1.779643
3.48	-0.0063	0.0069	2.5723	-0.1355	-0.3464	-0.34862	-0.891139	-0.002489	0.1200	-3.139482
3.49	-0.0051	0.0097	3.6209	-0.1363	-0.1736	-0.493663	-0.628452	-0.002534	0.0301	-2.556694

3.5	-0.0055	0.0081	3.0217	-0.1366	0.0000	-0.412783	-1.61E-12	-0.002549	0.0000	-2.750957
3.51	-0.0067	0.0057	2.1229	-0.1363	0.1736	-0.289426	0.36845	-0.002534	0.0301	-3.333745
3.52	-0.0059	0.0077	2.8719	-0.1355	0.3464	-0.389225	0.994934	-0.002489	0.1200	-2.94522
3.53	-0.0059	0.0077	2.8719	-0.1342	0.5179	-0.38537	1.487491	-0.002416	0.2683	-2.94522
3.54	-0.0051	0.0065	2.4225	-0.1323	0.6874	-0.32053	1.665246	-0.002316	0.4725	-2.556694
3.55	-0.0040	0.0065	2.4225	-0.1299	0.8542	-0.31473	2.069201	-0.002193	0.7296	-1.973906
3.56	-0.0075	0.0061	2.2727	-0.1270	1.0176	-0.28866	2.312557	-0.002049	1.0354	-3.722271
3.57	-0.0075	0.0069	2.5723	-0.1236	1.1769	-0.317948	3.027356	-0.001888	1.3851	-3.722271
3.58	-0.0063	0.0097	3.6209	-0.1197	1.3316	-0.433456	4.82173	-0.001715	1.7733	-3.139482
3.59	-0.0059	0.0073	2.7221	-0.1153	1.4811	-0.313967	4.031685	-0.001534	2.1937	-2.94522
3.6	-0.0067	0.0089	3.3213	-0.1105	1.6247	-0.36706	5.39619	-0.001350	2.6397	-3.333745
3.61	-0.0040	0.0077	2.8719	-0.1053	1.7619	-0.302287	5.06007	-0.001166	3.1044	-1.973906
3.62	-0.0051	0.0065	2.4225	-0.0996	1.8922	-0.241235	4.583779	-0.000988	3.5804	-2.556694
3.63	-0.0094	0.0085	3.1715	-0.0935	2.0150	-0.296578	6.390481	-0.000818	4.0601	-4.693584
3.64	-0.0055	0.0069	2.5723	-0.0871	2.1298	-0.223985	5.478468	-0.000660	4.5361	-2.750957
3.65	-0.0059	0.0093	3.4711	-0.0803	2.2362	-0.278713	7.762216	-0.000518	5.0008	-2.94522
3.66	-0.0044	0.0069	2.5723	-0.0732	2.3338	-0.188284	6.003301	-0.000392	5.4468	-2.168169
3.67	-0.0071	0.0097	3.6209	-0.0658	2.4222	-0.238294	8.770695	-0.000285	5.8672	-3.528008
3.68	-0.0036	0.0093	3.4711	-0.0582	2.5011	-0.201894	8.681477	-0.000197	6.2554	-1.779643
3.69	-0.0051	0.0065	2.4225	-0.0503	2.5700	-0.121822	6.225853	-0.000127	6.6051	-2.556694
3.7	-0.0075	0.0057	2.1229	-0.0422	2.6289	-0.089614	5.580722	-0.000075	6.9109	-3.722271
3.71	-0.0063	0.0101	3.7707	-0.0340	2.6773	-0.128101	10.09533	-0.000039	7.1680	-3.139482
3.72	-0.0063	0.0069	2.5723	-0.0256	2.7152	-0.065844	6.984213	-0.000017	7.3722	-3.139482
3.73	-0.0075	0.0077	2.8719	-0.0171	2.7424	-0.049171	7.875715	-0.000005	7.5205	-3.722271
3.74	-0.0075	0.0077	2.8719	-0.0086	2.7587	-0.024634	7.922647	-0.000001	7.6104	-3.722271
3.75	-0.0028	0.0081	3.0217	0.0000	2.7641	-9.35E-14	8.35239	0.000000	7.6405	-1.391118
3.76	-0.0024	0.0081	3.0217	0.0086	2.7587	0.025919	8.335908	0.000001	7.6104	-1.196855
3.77	-0.0071	0.0073	2.7221	0.0171	2.7424	0.046606	7.464902	0.000005	7.5205	-3.528008
3.78	-0.0055	0.0081	3.0217	0.0256	2.7152	0.077348	8.204446	0.000017	7.3722	-2.750957
3.79	-0.0040	0.0085	3.1715	0.0340	2.6773	0.107744	8.491054	0.000039	7.1680	-1.973906
3.8	-0.0098	0.0073	2.7221	0.0422	2.6289	0.114909	7.15597	0.000075	6.9109	-4.887847
3.81	-0.0059	0.0085	3.1715	0.0503	2.5700	0.159489	8.150856	0.000127	6.6051	-2.94522
3.82	-0.0102	0.0085	3.1715	0.0582	2.5011	0.184468	7.932138	0.000197	6.2554	-5.08211
3.83	-0.0048	0.0097	3.6209	0.0658	2.4222	0.238294	8.770695	0.000285	5.8672	-2.362431
3.84	-0.0087	0.0077	2.8719	0.0732	2.3338	0.210215	6.702538	0.000392	5.4468	-4.305059
3.85	-0.0063	0.0081	3.0217	0.0803	2.2362	0.242628	6.757225	0.000518	5.0008	-3.139482
3.86	-0.0044	0.0069	2.5723	0.0871	2.1298	0.223985	5.478468	0.000660	4.5361	-2.168169
3.87	-0.0051	0.0077	2.8719	0.0935	2.0150	0.268561	5.78678	0.000818	4.0601	-2.556694
3.88	-0.0106	0.0105	3.9205	0.0996	1.8922	0.390412	7.418343	0.000988	3.5804	-5.276373
3.89	-0.0048	0.0049	1.8233	0.1053	1.7619	0.191911	3.212464	0.001166	3.1044	-2.362431
3.9	-0.0020	0.0061	2.2727	0.1105	1.6247	0.251169	3.692465	0.001350	2.6397	-1.002592
3.91	-0.0044	0.0093	3.4711	0.1153	1.4811	0.40036	5.141058	0.001534	2.1937	-2.168169
3.92	-0.0063	0.0061	2.2727	0.1197	1.3316	0.27206	3.026375	0.001715	1.7733	-3.139482
3.93	-0.0071	0.0089	3.3213	0.1236	1.1769	0.41053	3.908887	0.001888	1.3851	-3.528008
3.94	-0.0032	0.0069	2.5723	0.1270	1.0176	0.326715	2.617422	0.002049	1.0354	-1.58538
3.95	-0.0079	0.0069	2.5723	0.1299	0.8542	0.334192	2.197158	0.002193	0.7296	-3.916533
3.96	-0.0071	0.0069	2.5723	0.1323	0.6874	0.340351	1.768223	0.002316	0.4725	-3.528008
3.97	-0.0063	0.0061	2.2727	0.1342	0.5179	0.304963	1.177129	0.002416	0.2683	-3.139482
3.98	-0.0044	0.0069	2.5723	0.1355	0.3464	0.34862	0.891139	0.002489	0.1200	-2.168169
3.99	-0.0075	0.0081	3.0217	0.1363	0.1736	0.411968	0.524451	0.002534	0.0301	-3.722271
4	-0.0044	0.0053	1.9731	0.1366	0.0000	0.269534	1.42E-12	0.002549	0.0000	-2.168169
4.01	-0.0059	0.0077	2.8719	0.1363	-0.1736	0.391545	-0.498451	0.002534	0.0301	-2.94522
4.02	-0.0094	0.0105	3.9205	0.1355	-0.3464	0.531345	-1.358219	0.002489	0.1200	-4.693584
4.03	-0.0055	0.0061	2.2727	0.1342	-0.5179	0.304963	-1.177129	0.002416	0.2683	-2.750957
4.04	-0.0040	0.0065	2.4225	0.1323	-0.6874	0.32053	-1.665246	0.002316	0.4725	-1.973906
4.05	-0.0055	0.0061	2.2727	0.1299	-0.8542	0.295267	-1.941244	0.002193	0.7296	-2.750957
4.06	-0.0032	0.0081	3.0217	0.1270	-1.0176	0.383796	-3.07472	0.002049	1.0354	-1.58538
4.07	-0.0063	0.0093	3.4711	0.1236	-1.1769	0.429047	-4.085193	0.001888	1.3851	-3.139482
4.08	-0.0071	0.0065	2.4225	0.1197	-1.3316	0.289993	-3.225859	0.001715	1.7733	-3.528008
4.09	-0.0051	0.0089	3.3213	0.1153	-1.4811	0.383081	-4.919183	0.001534	2.1937	-2.556694
4.1	-0.0094	0.0097	3.6209	0.1105	-1.6247	0.400172	-5.882969	0.001350	2.6397	-4.693584
4.11	-0.0036	0.0053	1.9731	0.1053	-1.7619	0.207679	-3.476408	0.001166	3.1044	-1.779643
4.12	-0.0079	0.0057	2.1229	0.0996	-1.8922	0.211399	-4.016866	0.000988	3.5804	-3.916533
4.13	-0.0032	0.0049	1.8233	0.0935	-2.0150	0.1705	-3.673827	0.000818	4.0601	-1.58538
4.14	-0.0040	0.0073	2.7221	0.0871	-2.1298	0.237029	-5.797521	0.000660	4.5361	-1.973906
4.15	-0.0012	0.0065	2.4225	0.0803	-2.2362	0.194514	-5.417238	0.000518	5.0008	-0.614067
4.16	-0.0067	0.0081	3.0217	0.0732	-2.3338	0.22118	-7.052156	0.000392	5.4468	-3.333745
4.17	-0.0055	0.0045	1.6735	0.0658	-2.4222	0.110132	-4.053516	0.000285	5.8672	-2.750957
4.18	-0.0083	0.0073	2.7221	0.0582	-2.5011	0.158328	-6.808129	0.000197	6.2554	-4.110796
4.19	-0.0059	0.0073	2.7221	0.0503	-2.5700	0.136889	-6.995854	0.000127	6.6051	-2.94522
4.2	-0.0067	0.0061	2.2727	0.0422	-2.6289	0.095938	-5.974533	0.000075	6.9109	-3.333745

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.21	-0.0079	0.0065	2.4225	0.0340	-2.6773	0.082298	-6.485705	0.000039	7.1680	-3.916533
.22	-0.0087	0.0065	2.4225	0.0256	-2.7152	0.062009	-6.577469	0.000017	7.3722	-4.305059
.23	-0.0110	0.0081	3.0217	0.0171	-2.7424	0.051735	-8.286529	0.000005	7.5205	-5.470635
.24	-0.0048	0.0069	2.5723	0.0086	-2.7587	0.022064	-7.096123	0.000001	7.6104	-2.362431
.25	-0.0055	0.0065	2.4225	0.0000	-2.7641	9.62E-14	-6.696075	0.000000	7.6405	-2.750957
.26	-0.0067	0.0077	2.8719	-0.0086	-2.7587	-0.024634	-7.922647	-0.000001	7.6104	-3.333745
.27	-0.0059	0.0065	2.4225	-0.0171	-2.7424	-0.041476	-6.643274	-0.000005	7.5205	-2.94522
.28	-0.0083	0.0069	2.5723	-0.0256	-2.7152	-0.065844	-6.984213	-0.000017	7.3722	-4.110796
.29	-0.0087	0.0073	2.7221	-0.0340	-2.6773	-0.092476	-7.287845	-0.000039	7.1680	-4.305059
4.3	-0.0063	0.0073	2.7221	-0.0422	-2.6289	-0.114909	-7.15597	-0.000075	6.9109	-3.139482
.31	-0.0036	0.0073	2.7221	-0.0503	-2.5700	-0.136889	-6.995854	-0.000127	6.6051	-1.779643
.32	-0.0067	0.0065	2.4225	-0.0582	-2.5011	-0.140902	-6.05879	-0.000197	6.2554	-3.333745
.33	-0.0067	0.0077	2.8719	-0.0658	-2.4222	-0.189001	-6.956395	-0.000285	5.8672	-3.333745
.34	-0.0083	0.0081	3.0217	-0.0732	-2.3338	-0.22118	-7.052156	-0.000392	5.4468	-4.110796
.35	-0.0067	0.0053	1.9731	-0.0803	-2.2362	-0.158428	-4.412249	-0.000518	5.0008	-3.333745
.36	-0.0079	0.0089	3.3213	-0.0871	-2.1298	-0.289206	-7.073733	-0.000660	4.5361	-3.916533
.37	-0.0063	0.0045	1.6735	-0.0935	-2.0150	-0.156491	-3.371977	-0.000818	4.0601	-3.139482
.38	-0.0063	0.0081	3.0217	-0.0996	-1.8922	-0.300906	-5.717604	-0.000988	3.5804	-3.139482
.39	-0.0048	0.0085	3.1715	-0.1053	-1.7619	-0.333823	-5.587957	-0.001166	3.1044	-2.362431
4.4	-0.0048	0.0065	2.4225	-0.1105	-1.6247	-0.267725	-3.935854	-0.001350	2.6397	-2.362431
.41	-0.0059	0.0065	2.4225	-0.1153	-1.4811	-0.27941	-3.587936	-0.001534	2.1937	-2.94522
.42	-0.0059	0.0073	2.7221	-0.1197	-1.3316	-0.325859	-3.624827	-0.001715	1.7733	-2.94522
.43	-0.0118	0.0081	3.0217	-0.1236	-1.1769	-0.373497	-3.556275	-0.001888	1.3851	-5.859161
.44	-0.0079	0.0069	2.5723	-0.1270	-1.0176	-0.326715	-2.617422	-0.002049	1.0354	-3.916533
.45	-0.0102	0.0089	3.3213	-0.1299	-0.8542	-0.431505	-2.836945	-0.002193	0.7296	-5.08211
.46	-0.0024	0.0089	3.3213	-0.1323	-0.6874	-0.439457	-2.283109	-0.002316	0.4725	-1.196855
.47	-0.0059	0.0065	2.4225	-0.1342	-0.5179	-0.325065	-1.254719	-0.002416	0.2683	-2.94522
.48	-0.0098	0.0073	2.7221	-0.1355	-0.3464	-0.368922	-0.943036	-0.002489	0.1200	-4.887847
.49	-0.0059	0.0073	2.7221	-0.1363	-0.1736	-0.371121	-0.47245	-0.002534	0.0301	-2.94522
4.5	-0.0044	0.0061	2.2727	-0.1366	0.0000	-0.310462	-2.04E-12	-0.002549	0.0000	-2.168169
.51	-0.0040	0.0085	3.1715	-0.1363	0.1736	-0.432392	0.550451	-0.002534	0.0301	-1.973906
.52	-0.0044	0.0069	2.5723	-0.1355	0.3464	-0.34862	0.891139	-0.002489	0.1200	-2.168169
.53	-0.0098	0.0073	2.7221	-0.1342	0.5179	-0.365268	1.409901	-0.002416	0.2683	-4.887847
.54	-0.0051	0.0073	2.7221	-0.1323	0.6874	-0.360172	1.8712	-0.002316	0.4725	-2.556694
.55	-0.0024	0.0045	1.6735	-0.1299	0.8542	-0.217417	1.429414	-0.002193	0.7296	-1.196855
.56	-0.0063	0.0085	3.1715	-0.1270	1.0176	-0.402823	3.227152	-0.002049	1.0354	-3.139482
.57	-0.0063	0.0069	2.5723	-0.1236	1.1769	-0.317948	3.027356	-0.001888	1.3851	-3.139482
.58	-0.0063	0.0081	3.0217	-0.1197	1.3316	-0.361724	4.023794	-0.001715	1.7733	-3.139482
.59	-0.0055	0.0065	2.4225	-0.1153	1.4811	-0.27941	3.587936	-0.001534	2.1937	-2.750957
4.6	-0.0063	0.0073	2.7221	-0.1105	1.6247	-0.300837	4.422633	-0.001350	2.6397	-3.139482
.61	-0.0071	0.0061	2.2727	-0.1053	1.7619	-0.239215	4.004295	-0.001166	3.1044	-3.528008
.62	-0.0067	0.0089	3.3213	-0.0996	1.8922	-0.330741	6.284517	-0.000988	3.5804	-3.333745
.63	-0.0040	0.0073	2.7221	-0.0935	2.0150	-0.254552	5.484929	-0.000818	4.0601	-1.973906
.64	-0.0036	0.0065	2.4225	-0.0871	2.1298	-0.21094	5.159414	-0.000660	4.5361	-1.779643
.65	-0.0087	0.0069	2.5723	-0.0803	2.2362	-0.206542	5.752235	-0.000518	5.0008	-4.305059
.66	-0.0032	0.0069	2.5723	-0.0732	2.3338	-0.188284	6.003301	-0.000392	5.4468	-1.58538
.67	-0.0059	0.0093	3.4711	-0.0658	2.4222	-0.228436	8.407835	-0.000285	5.8672	-2.94522
.68	-0.0048	0.0053	1.9731	-0.0582	2.5011	-0.114762	4.934781	-0.000197	6.2554	-2.362431
.69	-0.0044	0.0037	1.3739	-0.0503	2.5700	-0.069089	3.530849	-0.000127	6.6051	-2.168169
4.7	-0.0059	0.0069	2.5723	-0.0422	2.6289	-0.108586	6.762158	-0.000075	6.9109	-2.94522
.71	-0.0055	0.0037	1.3739	-0.0340	2.6773	-0.046673	3.678218	-0.000039	7.1680	-2.750957
.72	-0.0055	0.0077	2.8719	-0.0256	2.7152	-0.073513	7.797702	-0.000017	7.3722	-2.750957
.73	-0.0044	0.0073	2.7221	-0.0171	2.7424	-0.046606	7.464902	-0.000005	7.5205	-2.168169
.74	-0.0063	0.0081	3.0217	-0.0086	2.7587	-0.025919	8.335908	-0.000001	7.6104	-3.139482
.75	-0.0028	0.0057	2.1229	0.0000	2.7641	-1.04E-13	5.867918	0.000000	7.6405	-1.391118
.76	-0.0063	0.0065	2.4225	0.0086	2.7587	0.020779	6.682862	0.000001	7.6104	-3.139482
.77	-0.0020	0.0069	2.5723	0.0171	2.7424	0.044041	7.054088	0.000005	7.5205	-1.002592
.78	-0.0079	0.0061	2.2727	0.0256	2.7152	0.058175	6.170725	0.000017	7.3722	-3.916533
.79	-0.0044	0.0061	2.2727	0.0340	2.6773	0.077209	6.084636	0.000039	7.1680	-2.168169
4.8	-0.0094	0.0061	2.2727	0.0422	2.6289	0.095938	5.974533	0.000075	6.9109	-4.693584
.81	-0.0083	0.0089	3.3213	0.0503	2.5700	0.167022	8.535857	0.000127	6.6051	-4.110796
.82	-0.0051	0.0081	3.0217	0.0582	2.5011	0.175754	7.557468	0.000197	6.2554	-2.556694
.83	-0.0055	0.0053	1.9731	0.0658	2.4222	0.129849	4.779236	0.000285	5.8672	-2.750957
.84	-0.0048	0.0053	1.9731	0.0732	2.3338	0.144423	4.604829	0.000392	5.4468	-2.362431
.85	-0.0036	0.0069	2.5723	0.0803	2.2362	0.206542	5.752235	0.000518	5.0008	-1.779643
.86	-0.0048	0.0081	3.0217	0.0871	2.1298	0.263118	6.435627	0.000660	4.5361	-2.362431
.87	-0.0075	0.0081	3.0217	0.0935	2.0150	0.282569	6.08863	0.000818	4.0601	-3.722271
.88	-0.0114	0.0069	2.5723	0.0996	1.8922	0.256153	4.867235	0.000988	3.5804	-5.664898
.89	-0.0122	0.0085	3.1715	0.1053	1.7619	0.333823	5.587957	0.001166	3.1044	-6.053424
4.9	-0.0079	0.0073	2.7221	0.1105	1.6247	0.300837	4.422633	0.001350	2.6397	-3.916533
.91	-0.0067	0.0081	3.0217	0.1153	1.4811	0.348524	4.475434	0.001534	2.1937	-3.333745

4.92	-0.0055	0.0057	2.1229	0.1197	1.3316	0.254127	2.826891	0.001715	1.7733	-2.750957
4.93	-0.0087	0.0061	2.2727	0.1236	1.1769	0.280915	2.674744	0.001888	1.3851	-4.305059
4.94	-0.0063	0.0105	3.9205	0.1270	1.0176	0.497958	3.989315	0.002049	1.0354	-3.139482
4.95	-0.0036	0.0069	2.5723	0.1299	0.8542	0.334192	2.197158	0.002193	0.7296	-1.779643
4.96	-0.0020	0.0093	3.4711	0.1323	0.6874	0.459278	2.386086	0.002316	0.4725	-1.002592
4.97	-0.0040	0.0057	2.1229	0.1342	0.5179	0.284861	1.099538	0.002416	0.2683	-1.973906
4.98	-0.0090	0.0077	2.8719	0.1355	0.3464	0.389225	0.994934	0.002489	0.1200	-4.499321
4.99	-0.0067	0.0045	1.6735	0.1363	0.1736	0.228154	0.290449	0.002534	0.0301	-3.333745
5	-0.0067	0.0057	2.1229	0.1366	0.0000	0.289998	2.3E-12	0.002549	0.0000	-3.333745
5.01	-0.0071	0.0081	3.0217	0.1363	-0.1736	0.411968	-0.524451	0.002534	0.0301	-3.528008
5.02	0.0019	0.0065	2.4225	0.1355	-0.3464	0.328317	-0.839241	0.002489	0.1200	0.940035
5.03	-0.0048	0.0081	3.0217	0.1342	-0.5179	0.405471	-1.565082	0.002416	0.2683	-2.362431
5.04	-0.0055	0.0061	2.2727	0.1323	-0.6874	0.300708	-1.562269	0.002316	0.4725	-2.750957
5.05	-0.0075	0.0081	3.0217	0.1299	-0.8542	0.39258	-2.58103	0.002193	0.7296	-3.722271
5.06	-0.0071	0.0069	2.5723	0.1270	-1.0176	0.326715	-2.617422	0.002049	1.0354	-3.528008
5.07	-0.0067	0.0073	2.7221	0.1236	-1.1769	0.336464	-3.203662	0.001888	1.3851	-3.333745
5.08	-0.0051	0.0113	4.2201	0.1197	-1.3316	0.505187	-5.619666	0.001715	1.7733	-2.556694
5.09	-0.0106	0.0081	3.0217	0.1153	-1.4811	0.348524	-4.475434	0.001534	2.1937	-5.276373
5.1	-0.0067	0.0065	2.4225	0.1105	-1.6247	0.267725	-3.935854	0.001350	2.6397	-3.333745
5.11	-0.0075	0.0081	3.0217	0.1053	-1.7619	0.318055	-5.324014	0.001166	3.1044	-3.722271
5.12	-0.0048	0.0069	2.5723	0.0996	-1.8922	0.256153	-4.867235	0.000988	3.5804	-2.362431
5.13	-0.0106	0.0077	2.8719	0.0935	-2.0150	0.268561	-5.78678	0.000818	4.0601	-5.276373
5.14	-0.0090	0.0089	3.3213	0.0871	-2.1298	0.289206	-7.073733	0.000660	4.5361	-4.499321
5.15	-0.0067	0.0073	2.7221	0.0803	-2.2362	0.218571	-6.087232	0.000518	5.0008	-3.333745
5.16	-0.0075	0.0097	3.6209	0.0732	-2.3338	0.265041	-8.450629	0.000392	5.4468	-3.722271
5.17	-0.0075	0.0061	2.2727	0.0658	-2.4222	0.149566	-5.504955	0.000285	5.8672	-3.722271
5.18	-0.0083	0.0081	3.0217	0.0582	-2.5011	0.175754	-7.557468	0.000197	6.2554	-4.110796
5.19	-0.0075	0.0081	3.0217	0.0503	-2.5700	0.151956	-7.765856	0.000127	6.6051	-3.722271
5.2	-0.0079	0.0085	3.1715	0.0422	-2.6289	0.133881	-8.337407	0.000075	6.9109	-3.916533
5.21	-0.0032	0.0089	3.3213	0.0340	-2.6773	0.112833	-8.892124	0.000039	7.1680	-1.58538
5.22	-0.0090	0.0081	3.0217	0.0256	-2.7152	0.077348	-8.204446	0.000017	7.3722	-4.499321
5.23	-0.0106	0.0081	3.0217	0.0171	-2.7424	0.051735	-8.286529	0.000005	7.5205	-5.276373
5.24	-0.0032	0.0081	3.0217	0.0086	-2.7587	0.025919	-8.335908	0.000001	7.6104	-1.58538
5.25	-0.0079	0.0089	3.3213	0.0000	-2.7641	1.93E-13	-9.180547	0.000000	7.6405	-3.916533
5.26	-0.0001	0.0069	2.5723	-0.0086	-2.7587	-0.022064	-7.096123	-0.000001	7.6104	-0.031278
5.27	-0.0048	0.0069	2.5723	-0.0171	-2.7424	-0.044041	-7.054088	-0.000005	7.5205	-2.362431
5.28	-0.0051	0.0089	3.3213	-0.0256	-2.7152	-0.085017	-9.017935	-0.000017	7.3722	-2.556694
5.29	-0.0051	0.0065	2.4225	-0.0340	-2.6773	-0.082298	-6.485705	-0.000039	7.1680	-2.556694
5.3	-0.0087	0.0081	3.0217	-0.0422	-2.6289	-0.127557	-7.943595	-0.000075	6.9109	-4.305059
5.31	-0.0036	0.0069	2.5723	-0.0503	-2.5700	-0.129355	-6.610854	-0.000127	6.6051	-1.779643
5.32	-0.0036	0.0085	3.1715	-0.0582	-2.5011	-0.184468	-7.932138	-0.000197	6.2554	-1.779643
5.33	-0.0048	0.0069	2.5723	-0.0658	-2.4222	-0.169284	-6.230675	-0.000285	5.8672	-2.362431
5.34	-0.0083	0.0077	2.8719	-0.0732	-2.3338	-0.210215	-6.702538	-0.000392	5.4468	-4.110796
5.35	-0.0067	0.0101	3.7707	-0.0803	-2.2362	-0.30277	-8.432209	-0.000518	5.0008	-3.333745
5.36	-0.0063	0.0081	3.0217	-0.0871	-2.1298	-0.263118	-6.435627	-0.000660	4.5361	-3.139482
5.37	-0.0067	0.0073	2.7221	-0.0935	-2.0150	-0.254552	-5.484929	-0.000818	4.0601	-3.333745
5.38	-0.0040	0.0077	2.8719	-0.0996	-1.8922	-0.285988	-5.434148	-0.000988	3.5804	-1.973906
5.39	-0.0087	0.0085	3.1715	-0.1053	-1.7619	-0.333823	-5.587957	-0.001166	3.1044	-4.305059
5.4	-0.0048	0.0081	3.0217	-0.1105	-1.6247	-0.333948	-4.909412	-0.001350	2.6397	-2.362431
5.41	-0.0036	0.0081	3.0217	-0.1153	-1.4811	-0.348524	-4.475434	-0.001534	2.1937	-1.779643
5.42	-0.0036	0.0093	3.4711	-0.1197	-1.3316	-0.415523	-4.622246	-0.001715	1.7733	-1.779643
5.43	-0.0071	0.0073	2.7221	-0.1236	-1.1769	-0.336464	-3.203662	-0.001888	1.3851	-3.528008
5.44	-0.0048	0.0069	2.5723	-0.1270	-1.0176	-0.326715	-2.617422	-0.002049	1.0354	-2.362431
5.45	-0.0044	0.0065	2.4225	-0.1299	-0.8542	-0.31473	-2.069201	-0.002193	0.7296	-2.168169
5.46	-0.0051	0.0109	4.0703	-0.1323	-0.6874	-0.538563	-2.797995	-0.002316	0.4725	-2.556694
5.47	-0.0055	0.0081	3.0217	-0.1342	-0.5179	-0.405471	-1.565082	-0.002416	0.2683	-2.750957
5.48	-0.0102	0.0089	3.3213	-0.1355	-0.3464	-0.450134	-1.150628	-0.002489	0.1200	-5.08211
5.49	-0.0075	0.0069	2.5723	-0.1363	-0.1736	-0.350697	-0.44645	-0.002534	0.0301	-3.722271
5.5	-0.0044	0.0065	2.4225	-0.1366	0.0000	-0.330926	-3.08E-12	-0.002549	0.0000	-2.168169
5.51	-0.0048	0.0073	2.7221	-0.1363	0.1736	-0.371121	0.47245	-0.002534	0.0301	-2.362431
5.52	-0.0067	0.0073	2.7221	-0.1355	0.3464	-0.368922	0.943036	-0.002489	0.1200	-3.333745
5.53	-0.0040	0.0065	2.4225	-0.1342	0.5179	-0.325065	1.254719	-0.002416	0.2683	-1.973906
5.54	-0.0071	0.0069	2.5723	-0.1323	0.6874	-0.340351	1.768223	-0.002316	0.4725	-3.528008
5.55	-0.0044	0.0089	3.3213	-0.1299	0.8542	-0.431505	2.836945	-0.002193	0.7296	-2.168169
5.56	-0.0055	0.0069	2.5723	-0.1270	1.0176	-0.326715	2.617422	-0.002049	1.0354	-2.750957
5.57	-0.0067	0.0081	3.0217	-0.1236	1.1769	-0.373497	3.556275	-0.001888	1.3851	-3.333745
5.58	-0.0083	0.0089	3.3213	-0.1197	1.3316	-0.39759	4.422762	-0.001715	1.7733	-4.110796
5.59	-0.0059	0.0085	3.1715	-0.1153	1.4811	-0.365803	4.697309	-0.001534	2.1937	-2.94522
5.6	-0.0055	0.0061	2.2727	-0.1105	1.6247	-0.251169	3.692465	-0.001350	2.6397	-2.750957
5.61	-0.0055	0.0089	3.3213	-0.1053	1.7619	-0.349591	5.851901	-0.001166	3.1044	-2.750957
5.62	-0.0067	0.0069	2.5723	-0.0996	1.8922	-0.256153	4.867235	-0.000988	3.5804	-3.333745

5.63	-0.0075	0.0073	2.7221	-0.0935	2.0150	-0.254552	5.484929	-0.000818	4.0601	-3.722271
5.64	-0.0079	0.0081	3.0217	-0.0871	2.1298	-0.263118	6.435627	-0.000660	4.5361	-3.916533
5.65	-0.0059	0.0077	2.8719	-0.0803	2.2362	-0.230599	6.422229	-0.000518	5.0008	-2.94522
5.66	-0.0071	0.0073	2.7221	-0.0732	2.3338	-0.19925	6.352919	-0.000392	5.4468	-3.528008
5.67	-0.0094	0.0089	3.3213	-0.0658	2.4222	-0.218577	8.044975	-0.000285	5.8672	-4.693584
5.68	-0.0051	0.0057	2.1229	-0.0582	2.5011	-0.123475	5.309451	-0.000197	6.2554	-2.556694
5.69	-0.0083	0.0049	1.8233	-0.0503	2.5700	-0.091689	4.685851	-0.000127	6.6051	-4.110796
5.7	-0.0071	0.0077	2.8719	-0.0422	2.6289	-0.121233	7.549782	-0.000075	6.9109	-3.528008
5.71	-0.0059	0.0085	3.1715	-0.0340	2.6773	-0.107744	8.491054	-0.000039	7.1680	-2.94522
5.72	-0.0055	0.0073	2.7221	-0.0256	2.7152	-0.069679	7.390958	-0.000017	7.3722	-2.750957
5.73	-0.0051	0.0069	2.5723	-0.0171	2.7424	-0.044041	7.054088	-0.000005	7.5205	-2.556694
5.74	-0.0016	0.0069	2.5723	-0.0086	2.7587	-0.022064	7.096123	-0.000001	7.6104	-0.808329
5.75	-0.0044	0.0097	3.6209	0.0000	2.7641	-2.44E-13	10.0087	0.000000	7.6405	-2.168169
5.76	-0.0067	0.0065	2.4225	0.0086	2.7587	0.020779	6.682862	0.000001	7.6104	-3.333745
5.77	-0.0063	0.0073	2.7221	0.0171	2.7424	0.046606	7.464902	0.000005	7.5205	-3.139482
5.78	-0.0048	0.0073	2.7221	0.0256	2.7152	0.069679	7.390958	0.000017	7.3722	-2.362431
5.79	-0.0032	0.0073	2.7221	0.0340	2.6773	0.092476	7.287845	0.000039	7.1680	-1.58538
5.8	-0.0067	0.0069	2.5723	0.0422	2.6289	0.108586	6.762158	0.000075	6.9109	-3.333745
5.81	-0.0048	0.0049	1.8233	0.0503	2.5700	0.091689	4.685851	0.000127	6.6051	-2.362431
5.82	-0.0048	0.0073	2.7221	0.0582	2.5011	0.158328	6.808129	0.000197	6.2554	-2.362431
5.83	-0.0067	0.0057	2.1229	0.0658	2.4222	0.139708	5.142096	0.000285	5.8672	-3.333745
5.84	-0.0075	0.0085	3.1715	0.0732	2.3338	0.232145	7.401774	0.000392	5.4468	-3.722271
5.85	-0.0075	0.0097	3.6209	0.0803	2.2362	0.290742	8.097212	0.000518	5.0008	-3.722271
5.86	-0.0083	0.0069	2.5723	0.0871	2.1298	0.223985	5.478468	0.000660	4.5361	-4.110796
5.87	-0.0087	0.0061	2.2727	0.0935	2.0150	0.212526	4.579378	0.000818	4.0601	-4.305059
5.88	-0.0051	0.0069	2.5723	0.0996	1.8922	0.256153	4.867235	0.000988	3.5804	-2.556694
5.89	-0.0067	0.0089	3.3213	0.1053	1.7619	0.349591	5.851901	0.001166	3.1044	-3.333745
5.9	-0.0044	0.0057	2.1229	0.1105	1.6247	0.234613	3.449076	0.001350	2.6397	-2.168169
5.91	-0.0055	0.0081	3.0217	0.1153	1.4811	0.348524	4.475434	0.001534	2.1937	-2.750957
5.92	-0.0048	0.0073	2.7221	0.1197	1.3316	0.325859	3.624827	0.001715	1.7733	-2.362431
5.93	-0.0075	0.0069	2.5723	0.1236	1.1769	0.317948	3.027356	0.001888	1.3851	-3.722271
5.94	-0.0055	0.0077	2.8719	0.1270	1.0176	0.364769	2.922287	0.002049	1.0354	-2.750957
5.95	-0.0059	0.0089	3.3213	0.1299	0.8542	0.431505	2.836945	0.002193	0.7296	-2.94522
5.96	-0.0063	0.0105	3.9205	0.1323	0.6874	0.518742	2.695018	0.002316	0.4725	-3.139482
5.97	-0.0055	0.0065	2.4225	0.1342	0.5179	0.325065	1.254719	0.002416	0.2683	-2.750957
5.98	-0.0048	0.0085	3.1715	0.1355	0.3464	0.429831	1.09873	0.002489	0.1200	-2.362431
5.99	-0.0051	0.0053	1.9731	0.1363	0.1736	0.269002	0.342449	0.002534	0.0301	-2.556694
6	-0.0044	0.0073	2.7221	0.1366	0.0000	0.371855	3.97E-12	0.002549	0.0000	-2.168169
6.01	-0.0059	0.0101	3.7707	0.1363	-0.1736	0.514087	-0.654452	0.002534	0.0301	-2.94522
6.02	-0.0063	0.0061	2.2727	0.1355	-0.3464	0.308014	-0.787343	0.002489	0.1200	-3.139482
6.03	-0.0059	0.0093	3.4711	0.1342	-0.5179	0.465776	-1.797854	0.002416	0.2683	-2.94522
6.04	-0.0114	0.0081	3.0217	0.1323	-0.6874	0.399815	-2.077155	0.002316	0.4725	-5.664898
6.05	-0.0040	0.0061	2.2727	0.1299	-0.8542	0.295267	-1.941244	0.002193	0.7296	-1.973906
6.06	-0.0059	0.0097	3.6209	0.1270	-1.0176	0.459904	-3.68445	0.002049	1.0354	-2.94522
6.07	-0.0067	0.0073	2.7221	0.1236	-1.1769	0.336464	-3.203662	0.001888	1.3851	-3.333745
6.08	-0.0063	0.0085	3.1715	0.1197	-1.3316	0.379657	-4.223278	0.001715	1.7733	-3.139482
6.09	-0.0067	0.0077	2.8719	0.1153	-1.4811	0.331246	-4.25356	0.001534	2.1937	-3.333745
6.1	-0.0048	0.0089	3.3213	0.1105	-1.6247	0.36706	-5.39619	0.001350	2.6397	-2.362431
6.11	-0.0024	0.0077	2.8719	0.1053	-1.7619	0.302287	-5.06007	0.001166	3.1044	-1.196855
6.12	-0.0044	0.0061	2.2727	0.0996	-1.8922	0.226317	-4.300322	0.000988	3.5804	-2.168169
6.13	-0.0048	0.0089	3.3213	0.0935	-2.0150	0.310587	-6.692331	0.000818	4.0601	-2.362431
6.14	-0.0071	0.0073	2.7221	0.0871	-2.1298	0.237029	-5.797521	0.000660	4.5361	-3.528008
6.15	-0.0090	0.0097	3.6209	0.0803	-2.2362	0.290742	-8.097212	0.000518	5.0008	-4.499321
6.16	-0.0051	0.0085	3.1715	0.0732	-2.3338	0.232145	-7.401774	0.000392	5.4468	-2.556694
6.17	-0.0090	0.0077	2.8719	0.0658	-2.4222	0.189001	-6.956395	0.000285	5.8672	-4.499321
6.18	-0.0063	0.0081	3.0217	0.0582	-2.5011	0.175754	-7.557468	0.000197	6.2554	-3.139482
6.19	-0.0075	0.0061	2.2727	0.0503	-2.5700	0.114289	-5.840852	0.000127	6.6051	-3.722271
6.2	-0.0032	0.0077	2.8719	0.0422	-2.6289	0.121233	-7.549782	0.000075	6.9109	-1.58538
6.21	-0.0102	0.0069	2.5723	0.0340	-2.6773	0.087387	-6.886775	0.000039	7.1680	-5.08211
6.22	-0.0071	0.0073	2.7221	0.0256	-2.7152	0.069679	-7.390958	0.000017	7.3722	-3.528008
6.23	-0.0083	0.0081	3.0217	0.0171	-2.7424	0.051735	-8.286529	0.000005	7.5205	-4.110796
6.24	-0.0067	0.0053	1.9731	0.0086	-2.7587	0.016924	-5.443077	0.000001	7.6104	-3.333745
6.25	-0.0048	0.0069	2.5723	0.0000	-2.7641	1.97E-13	-7.110154	0.000000	7.6405	-2.362431
6.26	-0.0063	0.0081	3.0217	-0.0086	-2.7587	-0.025919	-8.335908	-0.000001	7.6104	-3.139482
6.27	-0.0051	0.0069	2.5723	-0.0171	-2.7424	-0.044041	-7.054088	-0.000005	7.5205	-2.556694
6.28	-0.0048	0.0081	3.0217	-0.0256	-2.7152	-0.077348	-8.204446	-0.000017	7.3722	-2.362431
6.29	-0.0087	0.0069	2.5723	-0.0340	-2.6773	-0.087387	-6.886775	-0.000039	7.1680	-4.305059
6.3	-0.0075	0.0065	2.4225	-0.0422	-2.6289	-0.102262	-6.368346	-0.000075	6.9109	-3.722271
6.31	-0.0063	0.0097	3.6209	-0.0503	-2.5700	-0.182089	-9.305858	-0.000127	6.6051	-3.139482
6.32	-0.0075	0.0073	2.7221	-0.0582	-2.5011	-0.158328	-6.808129	-0.000197	6.2554	-3.722271
6.33	-0.0079	0.0065	2.4225	-0.0658	-2.4222	-0.159425	-5.867815	-0.000285	5.8672	-3.916533

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.34	-0.0106	0.0077	2.8719	-0.0732	-2.3338	-0.210215	-6.702538	-0.000392	5.4468	-5.276373
.35	-0.0106	0.0081	3.0217	-0.0803	-2.2362	-0.242628	-6.757225	-0.000518	5.0008	-5.276373
.36	-0.0051	0.0073	2.7221	-0.0871	-2.1298	-0.237029	-5.797521	-0.000660	4.5361	-2.556694
.37	-0.0044	0.0077	2.8719	-0.0935	-2.0150	-0.268561	-5.78678	-0.000818	4.0601	-2.168169
.38	-0.0090	0.0077	2.8719	-0.0996	-1.8922	-0.285988	-5.434148	-0.000988	3.5804	-4.499321
.39	-0.0048	0.0085	3.1715	-0.1053	-1.7619	-0.333823	-5.587957	-0.001166	3.1044	-2.362431
6.4	-0.0028	0.0089	3.3213	-0.1105	-1.6247	-0.36706	-5.39619	-0.001350	2.6397	-1.391118
.41	-0.0051	0.0073	2.7221	-0.1153	-1.4811	-0.313967	-4.031685	-0.001534	2.1937	-2.556694
.42	-0.0055	0.0113	4.2201	-0.1197	-1.3316	-0.505187	-5.619666	-0.001715	1.7733	-2.750957
.43	-0.0051	0.0061	2.2727	-0.1236	-1.1769	-0.280915	-2.674744	-0.001888	1.3851	-2.556694
.44	-0.0059	0.0057	2.1229	-0.1270	-1.0176	-0.269633	-2.160125	-0.002049	1.0354	-2.94522
.45	-0.0020	0.0077	2.8719	-0.1299	-0.8542	-0.373117	-2.453073	-0.002193	0.7296	-1.002592
.46	-0.0094	0.0077	2.8719	-0.1323	-0.6874	-0.379993	-1.974178	-0.002316	0.4725	-4.693584
.47	-0.0079	0.0073	2.7221	-0.1342	-0.5179	-0.365268	-1.409901	-0.002416	0.2683	-3.916533
.48	-0.0063	0.0069	2.5723	-0.1355	-0.3464	-0.34862	-0.891139	-0.002489	0.1200	-3.139482
.49	-0.0051	0.0109	4.0703	-0.1363	-0.1736	-0.554935	-0.706452	-0.002534	0.0301	-2.556694
6.5	-0.0079	0.0069	2.5723	-0.1366	0.0000	-0.35139	-4.23E-12	-0.002549	0.0000	-3.916533
.51	-0.0079	0.0069	2.5723	-0.1363	0.1736	-0.350697	0.44645	-0.002534	0.0301	-3.916533
.52	-0.0094	0.0073	2.7221	-0.1355	0.3464	-0.368922	0.943036	-0.002489	0.1200	-4.693584
.53	-0.0063	0.0085	3.1715	-0.1342	0.5179	-0.425573	1.642672	-0.002416	0.2683	-3.139482
.54	-0.0036	0.0069	2.5723	-0.1323	0.6874	-0.340351	1.768223	-0.002316	0.4725	-1.779643
.55	-0.0090	0.0073	2.7221	-0.1299	0.8542	-0.353655	2.325116	-0.002193	0.7296	-4.499321
.56	-0.0051	0.0105	3.9205	-0.1270	1.0176	-0.497958	3.989315	-0.002049	1.0354	-2.556694
.57	-0.0059	0.0081	3.0217	-0.1236	1.1769	-0.373497	3.556275	-0.001888	1.3851	-2.94522
.58	-0.0051	0.0093	3.4711	-0.1197	1.3316	-0.415523	4.622246	-0.001715	1.7733	-2.556694
.59	-0.0079	0.0073	2.7221	-0.1153	1.4811	-0.313967	4.031685	-0.001534	2.1937	-3.916533
6.6	-0.0063	0.0069	2.5723	-0.1105	1.6247	-0.284281	4.179243	-0.001350	2.6397	-3.139482
.61	-0.0048	0.0073	2.7221	-0.1053	1.7619	-0.286519	4.796126	-0.001166	3.1044	-2.362431
.62	-0.0044	0.0073	2.7221	-0.0996	1.8922	-0.27107	5.150691	-0.000988	3.5804	-2.168169
.63	-0.0087	0.0069	2.5723	-0.0935	2.0150	-0.240543	5.183079	-0.000818	4.0601	-4.305059
.64	-0.0067	0.0065	2.4225	-0.0871	2.1298	-0.21094	5.159414	-0.000660	4.5361	-3.333745
.65	-0.0090	0.0081	3.0217	-0.0803	2.2362	-0.242628	6.757225	-0.000518	5.0008	-4.499321
.66	-0.0020	0.0073	2.7221	-0.0732	2.3338	-0.19925	6.352919	-0.000392	5.4468	-1.002592
.67	-0.0102	0.0065	2.4225	-0.0658	2.4222	-0.159425	5.867815	-0.000285	5.8672	-5.08211
.68	-0.0048	0.0065	2.4225	-0.0582	2.5011	-0.140902	6.05879	-0.000197	6.2554	-2.362431
.69	-0.0067	0.0073	2.7221	-0.0503	2.5700	-0.136889	6.995854	-0.000127	6.6051	-3.333745
6.7	-0.0094	0.0073	2.7221	-0.0422	2.6289	-0.114909	7.15597	-0.000075	6.9109	-4.693584
.71	-0.0051	0.0065	2.4225	-0.0340	2.6773	-0.082298	6.485705	-0.000039	7.1680	-2.556694
.72	-0.0063	0.0097	3.6209	-0.0256	2.7152	-0.092686	9.831423	-0.000017	7.3722	-3.139482
.73	-0.0087	0.0073	2.7221	-0.0171	2.7424	-0.046606	7.464902	-0.000005	7.5205	-4.305059
.74	-0.0071	0.0069	2.5723	-0.0086	2.7587	-0.022064	7.096123	-0.000001	7.6104	-3.528008
.75	-0.0087	0.0077	2.8719	0.0000	2.7641	-2.47E-13	7.938311	0.000000	7.6405	-4.305059
.76	-0.0028	0.0081	3.0217	0.0086	2.7587	0.025919	8.335908	0.000001	7.6104	-1.391118
.77	-0.0048	0.0077	2.8719	0.0171	2.7424	0.049171	7.875715	0.000005	7.5205	-2.362431
.78	-0.0051	0.0073	2.7221	0.0256	2.7152	0.069679	7.390958	0.000017	7.3722	-2.556694
.79	-0.0048	0.0085	3.1715	0.0340	2.6773	0.107744	8.491054	0.000039	7.1680	-2.362431
6.8	-0.0075	0.0069	2.5723	0.0422	2.6289	0.108586	6.762158	0.000075	6.9109	-3.722271
.81	-0.0071	0.0085	3.1715	0.0503	2.5700	0.159489	8.150856	0.000127	6.6051	-3.528008
.82	-0.0087	0.0085	3.1715	0.0582	2.5011	0.184468	7.932138	0.000197	6.2554	-4.305059
.83	-0.0044	0.0073	2.7221	0.0658	2.4222	0.179142	6.593535	0.000285	5.8672	-2.168169
.84	-0.0071	0.0077	2.8719	0.0732	2.3338	0.210215	6.702538	0.000392	5.4468	-3.528008
.85	-0.0051	0.0065	2.4225	0.0803	2.2362	0.194514	5.417238	0.000518	5.0008	-2.556694
.86	-0.0067	0.0077	2.8719	0.0871	2.1298	0.250073	6.116574	0.000660	4.5361	-3.333745
.87	-0.0044	0.0093	3.4711	0.0935	2.0150	0.324595	6.994181	0.000818	4.0601	-2.168169
.88	-0.0024	0.0073	2.7221	0.0996	1.8922	0.27107	5.150691	0.000988	3.5804	-1.196855
.89	-0.0075	0.0093	3.4711	0.1053	1.7619	0.365358	6.115845	0.001166	3.1044	-3.722271
6.9	-0.0079	0.0069	2.5723	0.1105	1.6247	0.284281	4.179243	0.001350	2.6397	-3.916533
.91	-0.0090	0.0069	2.5723	0.1153	1.4811	0.296689	3.809811	0.001534	2.1937	-4.499321
.92	-0.0051	0.0093	3.4711	0.1197	1.3316	0.415523	4.622246	0.001715	1.7733	-2.556694
.93	-0.0114	0.0085	3.1715	0.1236	1.1769	0.392014	3.732581	0.001888	1.3851	-5.664898
.94	-0.0055	0.0081	3.0217	0.1270	1.0176	0.383796	3.07472	0.002049	1.0354	-2.750957
.95	-0.0090	0.0089	3.3213	0.1299	0.8542	0.431505	2.836945	0.002193	0.7296	-4.499321
.96	-0.0083	0.0065	2.4225	0.1323	0.6874	0.32053	1.665246	0.002316	0.4725	-4.110796
.97	-0.0059	0.0077	2.8719	0.1342	0.5179	0.38537	1.487491	0.002416	0.2683	-2.94522
.98	-0.0067	0.0069	2.5723	0.1355	0.3464	0.34862	0.891139	0.002489	0.1200	-3.333745
.99	-0.0075	0.0073	2.7221	0.1363	0.1736	0.371121	0.47245	0.002534	0.0301	-3.722271
7	-0.0063	0.0101	3.7707	0.1366	0.0000	0.515104	6.91E-12	0.002549	0.0000	-3.139482
.01	-0.0079	0.0077	2.8719	0.1363	-0.1736	0.391545	-0.498451	0.002534	0.0301	-3.916533
.02	-0.0028	0.0085	3.1715	0.1355	-0.3464	0.429831	-1.09873	0.002489	0.1200	-1.391118
.03	-0.0087	0.0077	2.8719	0.1342	-0.5179	0.38537	-1.487491	0.002416	0.2683	-4.305059
.04	-0.0036	0.0057	2.1229	0.1323	-0.6874	0.280887	-1.459292	0.002316	0.4725	-1.779643

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7.05	-0.0036	0.0073	2.7221	0.1299	-0.8542	0.353655	-2.325116	0.002193	0.7296	-1.779643
7.06	-0.0040	0.0065	2.4225	0.1270	-1.0176	0.307687	-2.46499	0.002049	1.0354	-1.973906
7.07	-0.0032	0.0085	3.1715	0.1236	-1.1769	0.392014	-3.732581	0.001888	1.3851	-1.58538
7.08	-0.0044	0.0073	2.7221	0.1197	-1.3316	0.325859	-3.624827	0.001715	1.7733	-2.168169
7.09	-0.0067	0.0077	2.8719	0.1153	-1.4811	0.331246	-4.25356	0.001534	2.1937	-3.333745
7.1	-0.0059	0.0081	3.0217	0.1105	-1.6247	0.333948	-4.909412	0.001350	2.6397	-2.94522
7.11	-0.0059	0.0077	2.8719	0.1053	-1.7619	0.302287	-5.06007	0.001166	3.1044	-2.94522
7.12	-0.0067	0.0085	3.1715	0.0996	-1.8922	0.315824	-6.001061	0.000988	3.5804	-3.333745
7.13	-0.0102	0.0089	3.3213	0.0935	-2.0150	0.310587	-6.692331	0.000818	4.0601	-5.08211
7.14	-0.0051	0.0065	2.4225	0.0871	-2.1298	0.21094	-5.159414	0.000660	4.5361	-2.556694
7.15	-0.0094	0.0105	3.9205	0.0803	-2.2362	0.314799	-8.767206	0.000518	5.0008	-4.693584
7.16	-0.0051	0.0057	2.1229	0.0732	-2.3338	0.155389	-4.954447	0.000392	5.4468	-2.556694
7.17	-0.0040	0.0081	3.0217	0.0658	-2.4222	0.19886	-7.319255	0.000285	5.8672	-1.973906
7.18	-0.0083	0.0113	4.2201	0.0582	-2.5011	0.24546	-10.55483	0.000197	6.2554	-4.110796
7.19	-0.0055	0.0089	3.3213	0.0503	-2.5700	0.167022	-8.535857	0.000127	6.6051	-2.750957
7.2	-0.0083	0.0073	2.7221	0.0422	-2.6289	0.114909	-7.15597	0.000075	6.9109	-4.110796
7.21	-0.0071	0.0061	2.2727	0.0340	-2.6773	0.077209	-6.084636	0.000039	7.1680	-3.528008
7.22	-0.0087	0.0085	3.1715	0.0256	-2.7152	0.081182	-8.61119	0.000017	7.3722	-4.305059
7.23	-0.0048	0.0093	3.4711	0.0171	-2.7424	0.05943	-9.51897	0.000005	7.5205	-2.362431
7.24	-0.0032	0.0065	2.4225	0.0086	-2.7587	0.020779	-6.682862	0.000001	7.6104	-1.58538
7.25	-0.0040	0.0105	3.9205	0.0000	-2.7641	3.73E-13	-10.83686	0.000000	7.6405	-1.973906
7.26	-0.0059	0.0069	2.5723	-0.0086	-2.7587	-0.022064	-7.096123	-0.000001	7.6104	-2.94522
7.27	-0.0063	0.0057	2.1229	-0.0171	-2.7424	-0.036346	-5.821648	-0.000005	7.5205	-3.139482
7.28	-0.0090	0.0085	3.1715	-0.0256	-2.7152	-0.081182	-8.61119	-0.000017	7.3722	-4.499321
7.29	-0.0063	0.0089	3.3213	-0.0340	-2.6773	-0.112833	-8.892124	-0.000039	7.1680	-3.139482
7.3	-0.0071	0.0081	3.0217	-0.0422	-2.6289	-0.127557	-7.943595	-0.000075	6.9109	-3.528008
7.31	-0.0083	0.0065	2.4225	-0.0503	-2.5700	-0.121822	-6.225853	-0.000127	6.6051	-4.110796
7.32	-0.0098	0.0105	3.9205	-0.0582	-2.5011	-0.228034	-9.805486	-0.000197	6.2554	-4.887847
7.33	-0.0040	0.0109	4.0703	-0.0658	-2.4222	-0.26787	-9.859275	-0.000285	5.8672	-1.973906
7.34	-0.0071	0.0045	1.6735	-0.0732	-2.3338	-0.122493	-3.905592	-0.000392	5.4468	-3.528008
7.35	-0.0063	0.0093	3.4711	-0.0803	-2.2362	-0.278713	-7.762216	-0.000518	5.0008	-3.139482
7.36	-0.0051	0.0077	2.8719	-0.0871	-2.1298	-0.250073	-6.116574	-0.000660	4.5361	-2.556694
7.37	-0.0075	0.0057	2.1229	-0.0935	-2.0150	-0.198517	-4.277528	-0.000818	4.0601	-3.722271
7.38	-0.0055	0.0065	2.4225	-0.0996	-1.8922	-0.241235	-4.583779	-0.000988	3.5804	-2.750957
7.39	-0.0110	0.0093	3.4711	-0.1053	-1.7619	-0.365358	-6.115845	-0.001166	3.1044	-5.470635
7.4	-0.0083	0.0077	2.8719	-0.1105	-1.6247	-0.317393	-4.666022	-0.001350	2.6397	-4.110796
7.41	-0.0114	0.0073	2.7221	-0.1153	-1.4811	-0.313967	-4.031685	-0.001534	2.1937	-5.664898
7.42	-0.0067	0.0081	3.0217	-0.1197	-1.3316	-0.361724	-4.023794	-0.001715	1.7733	-3.333745
7.43	-0.0087	0.0069	2.5723	-0.1236	-1.1769	-0.317948	-3.027356	-0.001888	1.3851	-4.305059
7.44	-0.0087	0.0077	2.8719	-0.1270	-1.0176	-0.364769	-2.922287	-0.002049	1.0354	-4.305059
7.45	-0.0083	0.0061	2.2727	-0.1299	-0.8542	-0.295267	-1.941244	-0.002193	0.7296	-4.110796
7.46	-0.0063	0.0061	2.2727	-0.1323	-0.6874	-0.300708	-1.562269	-0.002316	0.4725	-3.139482
7.47	-0.0032	0.0085	3.1715	-0.1342	-0.5179	-0.425573	-1.642672	-0.002416	0.2683	-1.58538
7.48	-0.0102	0.0073	2.7221	-0.1355	-0.3464	-0.368922	-0.943036	-0.002489	0.1200	-5.08211
7.49	-0.0055	0.0077	2.8719	-0.1363	-0.1736	-0.391545	-0.498451	-0.002534	0.0301	-2.750957
7.5	-0.0102	0.0045	1.6735	-0.1366	0.0000	-0.228606	-3.38E-12	-0.002549	0.0000	-5.08211
7.51	-0.0051	0.0081	3.0217	-0.1363	0.1736	-0.411968	0.524451	-0.002534	0.0301	-2.556694
7.52	-0.0067	0.0057	2.1229	-0.1355	0.3464	-0.287711	0.735445	-0.002489	0.1200	-3.333745
7.53	-0.0059	0.0069	2.5723	-0.1342	0.5179	-0.345166	1.33231	-0.002416	0.2683	-2.94522
7.54	-0.0102	0.0093	3.4711	-0.1323	0.6874	-0.459278	2.386086	-0.002316	0.4725	-5.08211
7.55	-0.0063	0.0073	2.7221	-0.1299	0.8542	-0.353655	2.325116	-0.002193	0.7296	-3.139482
7.56	-0.0044	0.0077	2.8719	-0.1270	1.0176	-0.364769	2.922287	-0.002049	1.0354	-2.168169
7.57	-0.0048	0.0073	2.7221	-0.1236	1.1769	-0.336464	3.203662	-0.001888	1.3851	-2.362431
7.58	-0.0059	0.0077	2.8719	-0.1197	1.3316	-0.343792	3.824311	-0.001715	1.7733	-2.94522
7.59	-0.0094	0.0073	2.7221	-0.1153	1.4811	-0.313967	4.031685	-0.001534	2.1937	-4.693584
7.6	-0.0106	0.0065	2.4225	-0.1105	1.6247	-0.267725	3.935854	-0.001350	2.6397	-5.276373
7.61	-0.0040	0.0065	2.4225	-0.1053	1.7619	-0.254983	4.268239	-0.001166	3.1044	-1.973906
7.62	-0.0063	0.0073	2.7221	-0.0996	1.8922	-0.27107	5.150691	-0.000988	3.5804	-3.139482
7.63	-0.0071	0.0089	3.3213	-0.0935	2.0150	-0.310587	6.692331	-0.000818	4.0601	-3.528008
7.64	-0.0090	0.0057	2.1229	-0.0871	2.1298	-0.184852	4.521308	-0.000660	4.5361	-4.499321
7.65	-0.0051	0.0081	3.0217	-0.0803	2.2362	-0.242628	6.757225	-0.000518	5.0008	-2.556694
7.66	-0.0067	0.0073	2.7221	-0.0732	2.3338	-0.19925	6.352919	-0.000392	5.4468	-3.333745
7.67	-0.0087	0.0065	2.4225	-0.0658	2.4222	-0.159425	5.867815	-0.000285	5.8672	-4.305059
7.68	-0.0055	0.0057	2.1229	-0.0582	2.5011	-0.123475	5.309451	-0.000197	6.2554	-2.750957
7.69	-0.0067	0.0073	2.7221	-0.0503	2.5700	-0.136889	6.995854	-0.000127	6.6051	-3.333745
7.7	-0.0075	0.0073	2.7221	-0.0422	2.6289	-0.114909	7.15597	-0.000075	6.9109	-3.722271
7.71	-0.0087	0.0069	2.5723	-0.0340	2.6773	-0.087387	6.886775	-0.000039	7.1680	-4.305059
7.72	-0.0059	0.0085	3.1715	-0.0256	2.7152	-0.081182	8.61119	-0.000017	7.3722	-2.94522
7.73	-0.0075	0.0077	2.8719	-0.0171	2.7424	-0.049171	7.875715	-0.000005	7.5205	-3.722271
7.74	-0.0075	0.0073	2.7221	-0.0086	2.7587	-0.023349	7.509385	-0.000001	7.6104	-3.722271
7.75	-0.0075	0.0081	3.0217	0.0000	2.7641	-3.15E-13	8.35239	0.000000	7.6405	-3.722271

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7.76	-0.0051	0.0073	2.7221	0.0086	2.7587	0.023349	7.509385	0.000001	7.6104	-2.556694
7.77	-0.0087	0.0077	2.8719	0.0171	2.7424	0.049171	7.875715	0.000005	7.5205	-4.305059
7.78	-0.0063	0.0077	2.8719	0.0256	2.7152	0.073513	7.797702	0.000017	7.3722	-3.139482
7.79	-0.0048	0.0073	2.7221	0.0340	2.6773	0.092476	7.287845	0.000039	7.1680	-2.362431
7.8	-0.0044	0.0069	2.5723	0.0422	2.6289	0.108586	6.762158	0.000075	6.9109	-2.168169
7.81	-0.0090	0.0065	2.4225	0.0503	2.5700	0.121822	6.225853	0.000127	6.6051	-4.499321
7.82	-0.0048	0.0097	3.6209	0.0582	2.5011	0.210607	9.056147	0.000197	6.2554	-2.362431
7.83	-0.0059	0.0077	2.8719	0.0658	2.4222	0.189001	6.956395	0.000285	5.8672	-2.94522
7.84	-0.0032	0.0065	2.4225	0.0732	2.3338	0.177319	5.653683	0.000392	5.4468	-1.58538
7.85	-0.0079	0.0081	3.0217	0.0803	2.2362	0.242628	6.757225	0.000518	5.0008	-3.916533
7.86	-0.0051	0.0069	2.5723	0.0871	2.1298	0.223985	5.478468	0.000660	4.5361	-2.556694
7.87	-0.0071	0.0069	2.5723	0.0935	2.0150	0.240543	5.183079	0.000818	4.0601	-3.528008
7.88	-0.0032	0.0065	2.4225	0.0996	1.8922	0.241235	4.583779	0.000988	3.5804	-1.58538
7.89	-0.0075	0.0073	2.7221	0.1053	1.7619	0.286519	4.796126	0.001166	3.1044	-3.722271
7.9	-0.0036	0.0057	2.1229	0.1105	1.6247	0.234613	3.449076	0.001350	2.6397	-1.779643
7.91	-0.0051	0.0081	3.0217	0.1153	1.4811	0.348524	4.475434	0.001534	2.1937	-2.556694
7.92	-0.0044	0.0081	3.0217	0.1197	1.3316	0.361724	4.023794	0.001715	1.7733	-2.168169
7.93	-0.0036	0.0081	3.0217	0.1236	1.1769	0.373497	3.556275	0.001888	1.3851	-1.779643
7.94	-0.0055	0.0069	2.5723	0.1270	1.0176	0.326715	2.617422	0.002049	1.0354	-2.750957
7.95	-0.0063	0.0061	2.2727	0.1299	0.8542	0.295267	1.941244	0.002193	0.7296	-3.139482
7.96	-0.0067	0.0073	2.7221	0.1323	0.6874	0.360172	1.8712	0.002316	0.4725	-3.333745
7.97	-0.0071	0.0057	2.1229	0.1342	0.5179	0.284861	1.099538	0.002416	0.2683	-3.528008
7.98	-0.0048	0.0077	2.8719	0.1355	0.3464	0.389225	0.994934	0.002489	0.1200	-2.362431
7.99	-0.0067	0.0057	2.1229	0.1363	0.1736	0.289426	0.36845	0.002534	0.0301	-3.333745
8	-0.0075	0.0065	2.4225	0.1366	0.0000	0.330926	5.34E-12	0.002549	0.0000	-3.722271
8.01	-0.0044	0.0089	3.3213	0.1363	-0.1736	0.452816	-0.576451	0.002534	0.0301	-2.168169
8.02	-0.0048	0.0065	2.4225	0.1355	-0.3464	0.328317	-0.839241	0.002489	0.1200	-2.362431
8.03	-0.0071	0.0093	3.4711	0.1342	-0.5179	0.465776	-1.797854	0.002416	0.2683	-3.528008
8.04	-0.0071	0.0065	2.4225	0.1323	-0.6874	0.32053	-1.665246	0.002316	0.4725	-3.528008
8.05	-0.0110	0.0049	1.8233	0.1299	-0.8542	0.236879	-1.557372	0.002193	0.7296	-5.470635
8.06	-0.0059	0.0073	2.7221	0.1270	-1.0176	0.345742	-2.769855	0.002049	1.0354	-2.94522
8.07	-0.0094	0.0057	2.1229	0.1236	-1.1769	0.262398	-2.498438	0.001888	1.3851	-4.693584
8.08	-0.0079	0.0093	3.4711	0.1197	-1.3316	0.415523	-4.622246	0.001715	1.7733	-3.916533
8.09	-0.0071	0.0069	2.5723	0.1153	-1.4811	0.296689	-3.809811	0.001534	2.1937	-3.528008
8.1	-0.0044	0.0069	2.5723	0.1105	-1.6247	0.284281	-4.179243	0.001350	2.6397	-2.168169
8.11	-0.0130	0.0057	2.1229	0.1053	-1.7619	0.223447	-3.740352	0.001166	3.1044	-6.441949
8.12	-0.0055	0.0065	2.4225	0.0996	-1.8922	0.241235	-4.583779	0.000988	3.5804	-2.750957
8.13	-0.0063	0.0069	2.5723	0.0935	-2.0150	0.240543	-5.183079	0.000818	4.0601	-3.139482
8.14	-0.0044	0.0053	1.9731	0.0871	-2.1298	0.171807	-4.202255	0.000660	4.5361	-2.168169
8.15	-0.0040	0.0089	3.3213	0.0803	-2.2362	0.266685	-7.427219	0.000518	5.0008	-1.973906
8.16	-0.0048	0.0081	3.0217	0.0732	-2.3338	0.22118	-7.052156	0.000392	5.4468	-2.362431
8.17	-0.0044	0.0077	2.8719	0.0658	-2.4222	0.189001	-6.956395	0.000285	5.8672	-2.168169
8.18	-0.0036	0.0065	2.4225	0.0582	-2.5011	0.140902	-6.05879	0.000197	6.2554	-1.779643
8.19	-0.0063	0.0085	3.1715	0.0503	-2.5700	0.159489	-8.150856	0.000127	6.6051	-3.139482
8.2	-0.0059	0.0073	2.7221	0.0422	-2.6289	0.114909	-7.15597	0.000075	6.9109	-2.94522
8.21	-0.0016	0.0073	2.7221	0.0340	-2.6773	0.092476	-7.287845	0.000039	7.1680	-0.808329
8.22	-0.0075	0.0073	2.7221	0.0256	-2.7152	0.069679	-7.390958	0.000017	7.3722	-3.722271
8.23	-0.0079	0.0073	2.7221	0.0171	-2.7424	0.046606	-7.464902	0.000005	7.5205	-3.916533
8.24	-0.0079	0.0089	3.3213	0.0086	-2.7587	0.028489	-9.162432	0.000001	7.6104	-3.916533
8.25	-0.0055	0.0081	3.0217	0.0000	-2.7641	3.4E-13	-8.35239	0.000000	7.6405	-2.750957
8.26	-0.0059	0.0065	2.4225	-0.0086	-2.7587	-0.020779	-6.682862	-0.000001	7.6104	-2.94522
8.27	-0.0055	0.0073	2.7221	-0.0171	-2.7424	-0.046606	-7.464902	-0.000005	7.5205	-2.750957
8.28	-0.0051	0.0061	2.2727	-0.0256	-2.7152	-0.058175	-6.170725	-0.000017	7.3722	-2.556694
8.29	-0.0106	0.0049	1.8233	-0.0340	-2.6773	-0.061941	-4.881427	-0.000039	7.1680	-5.276373
8.3	-0.0036	0.0073	2.7221	-0.0422	-2.6289	-0.114909	-7.15597	-0.000075	6.9109	-1.779643
8.31	-0.0067	0.0057	2.1229	-0.0503	-2.5700	-0.106755	-5.455852	-0.000127	6.6051	-3.333745
8.32	-0.0067	0.0077	2.8719	-0.0582	-2.5011	-0.167041	-7.182799	-0.000197	6.2554	-3.333745
8.33	-0.0063	0.0061	2.2727	-0.0658	-2.4222	-0.149566	-5.504955	-0.000285	5.8672	-3.139482
8.34	-0.0071	0.0069	2.5723	-0.0732	-2.3338	-0.188284	-6.003301	-0.000392	5.4468	-3.528008
8.35	-0.0063	0.0085	3.1715	-0.0803	-2.2362	-0.254656	-7.092222	-0.000518	5.0008	-3.139482
8.36	-0.0051	0.0081	3.0217	-0.0871	-2.1298	-0.263118	-6.435627	-0.000660	4.5361	-2.556694
8.37	-0.0048	0.0069	2.5723	-0.0935	-2.0150	-0.240543	-5.183079	-0.000818	4.0601	-2.362431
8.38	-0.0098	0.0073	2.7221	-0.0996	-1.8922	-0.27107	-5.150691	-0.000988	3.5804	-4.887847
8.39	-0.0098	0.0057	2.1229	-0.1053	-1.7619	-0.223447	-3.740352	-0.001166	3.1044	-4.887847
8.4	-0.0055	0.0065	2.4225	-0.1105	-1.6247	-0.267725	-3.935854	-0.001350	2.6397	-2.750957
8.41	-0.0059	0.0081	3.0217	-0.1153	-1.4811	-0.348524	-4.475434	-0.001534	2.1937	-2.94522
8.42	-0.0051	0.0077	2.8719	-0.1197	-1.3316	-0.343792	-3.824311	-0.001715	1.7733	-2.556694
8.43	-0.0063	0.0069	2.5723	-0.1236	-1.1769	-0.317948	-3.027356	-0.001888	1.3851	-3.139482
8.44	-0.0094	0.0069	2.5723	-0.1270	-1.0176	-0.326715	-2.617422	-0.002049	1.0354	-4.693584
8.45	-0.0044	0.0073	2.7221	-0.1299	-0.8542	-0.353655	-2.325116	-0.002193	0.7296	-2.168169
8.46	-0.0028	0.0057	2.1229	-0.1323	-0.6874	-0.280887	-1.459292	-0.002316	0.4725	-1.391118

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8.47	-0.0063	0.0065	2.4225	-0.1342	-0.5179	-0.325065	-1.254719	-0.002416	0.2683	-3.139482
8.48	-0.0083	0.0069	2.5723	-0.1355	-0.3464	-0.34862	-0.891139	-0.002489	0.1200	-4.110796
8.49	-0.0114	0.0065	2.4225	-0.1363	-0.1736	-0.330273	-0.42045	-0.002534	0.0301	-5.664898
8.5	-0.0063	0.0073	2.7221	-0.1366	0.0000	-0.371855	-6.46E-12	-0.002549	0.0000	-3.139482
8.51	-0.0051	0.0085	3.1715	-0.1363	0.1736	-0.432392	0.550451	-0.002534	0.0301	-2.556694
8.52	-0.0044	0.0077	2.8719	-0.1355	0.3464	-0.389225	0.994934	-0.002489	0.1200	-2.168169
8.53	-0.0051	0.0089	3.3213	-0.1342	0.5179	-0.445675	1.720263	-0.002416	0.2683	-2.556694
8.54	-0.0028	0.0093	3.4711	-0.1323	0.6874	-0.459278	2.386086	-0.002316	0.4725	-1.391118
8.55	-0.0044	0.0065	2.4225	-0.1299	0.8542	-0.31473	2.069201	-0.002193	0.7296	-2.168169
8.56	-0.0051	0.0057	2.1229	-0.1270	1.0176	-0.269633	2.160125	-0.002049	1.0354	-2.556694
8.57	-0.0075	0.0077	2.8719	-0.1236	1.1769	-0.354981	3.379968	-0.001888	1.3851	-3.722271
8.58	-0.0059	0.0085	3.1715	-0.1197	1.3316	-0.379657	4.223278	-0.001715	1.7733	-2.94522
8.59	-0.0059	0.0065	2.4225	-0.1153	1.4811	-0.27941	3.587936	-0.001534	2.1937	-2.94522
8.6	-0.0067	0.0081	3.0217	-0.1105	1.6247	-0.333948	4.909412	-0.001350	2.6397	-3.333745
8.61	-0.0051	0.0081	3.0217	-0.1053	1.7619	-0.318055	5.324014	-0.001166	3.1044	-2.556694
8.62	-0.0051	0.0065	2.4225	-0.0996	1.8922	-0.241235	4.583779	-0.000988	3.5804	-2.556694
8.63	-0.0071	0.0069	2.5723	-0.0935	2.0150	-0.240543	5.183079	-0.000818	4.0601	-3.528008
8.64	-0.0063	0.0069	2.5723	-0.0871	2.1298	-0.223985	5.478468	-0.000660	4.5361	-3.139482
8.65	-0.0102	0.0065	2.4225	-0.0803	2.2362	-0.194514	5.417238	-0.000518	5.0008	-5.08211
8.66	-0.0044	0.0089	3.3213	-0.0732	2.3338	-0.243111	7.751392	-0.000392	5.4468	-2.168169
8.67	-0.0059	0.0089	3.3213	-0.0658	2.4222	-0.218577	8.044975	-0.000285	5.8672	-2.94522
8.68	-0.0051	0.0081	3.0217	-0.0582	2.5011	-0.175754	7.557468	-0.000197	6.2554	-2.556694
8.69	-0.0083	0.0057	2.1229	-0.0503	2.5700	-0.106755	5.455852	-0.000127	6.6051	-4.110796
8.7	-0.0110	0.0097	3.6209	-0.0422	2.6289	-0.152852	9.518844	-0.000075	6.9109	-5.470635
8.71	-0.0059	0.0077	2.8719	-0.0340	2.6773	-0.097566	7.688914	-0.000039	7.1680	-2.94522
8.72	-0.0083	0.0081	3.0217	-0.0256	2.7152	-0.077348	8.204446	-0.000017	7.3722	-4.110796
8.73	-0.0087	0.0089	3.3213	-0.0171	2.7424	-0.056865	9.108156	-0.000005	7.5205	-4.305059
8.74	-0.0094	0.0073	2.7221	-0.0086	2.7587	-0.023349	7.509385	-0.000001	7.6104	-4.693584
8.75	-0.0024	0.0081	3.0217	0.0000	2.7641	-3.68E-13	8.35239	0.000000	7.6405	-1.196855
8.76	-0.0063	0.0073	2.7221	0.0086	2.7587	0.023349	7.509385	0.000001	7.6104	-3.139482
8.77	-0.0055	0.0073	2.7221	0.0171	2.7424	0.046606	7.464902	0.000005	7.5205	-2.750957
8.78	-0.0083	0.0065	2.4225	0.0256	2.7152	0.062009	6.577469	0.000017	7.3722	-4.110796
8.79	-0.0051	0.0089	3.3213	0.0340	2.6773	0.112833	8.892124	0.000039	7.1680	-2.556694
8.8	-0.0040	0.0081	3.0217	0.0422	2.6289	0.127557	7.943595	0.000075	6.9109	-1.973906
8.81	-0.0079	0.0089	3.3213	0.0503	2.5700	0.167022	8.535857	0.000127	6.6051	-3.916533
8.82	-0.0079	0.0097	3.6209	0.0582	2.5011	0.210607	9.056147	0.000197	6.2554	-3.916533
8.83	-0.0071	0.0081	3.0217	0.0658	2.4222	0.19886	7.319255	0.000285	5.8672	-3.528008
8.84	-0.0044	0.0081	3.0217	0.0732	2.3338	0.22118	7.052156	0.000392	5.4468	-2.168169
8.85	-0.0055	0.0077	2.8719	0.0803	2.2362	0.230599	6.422229	0.000518	5.0008	-2.750957
8.86	-0.0071	0.0081	3.0217	0.0871	2.1298	0.263118	6.435627	0.000660	4.5361	-3.528008
8.87	-0.0059	0.0069	2.5723	0.0935	2.0150	0.240543	5.183079	0.000818	4.0601	-2.94522
8.88	-0.0051	0.0089	3.3213	0.0996	1.8922	0.330741	6.284517	0.000988	3.5804	-2.556694
8.89	-0.0071	0.0081	3.0217	0.1053	1.7619	0.318055	5.324014	0.001166	3.1044	-3.528008
8.9	-0.0055	0.0085	3.1715	0.1105	1.6247	0.350504	5.152801	0.001350	2.6397	-2.750957
8.91	-0.0063	0.0081	3.0217	0.1153	1.4811	0.348524	4.475434	0.001534	2.1937	-3.139482
8.92	-0.0071	0.0045	1.6735	0.1197	1.3316	0.200329	2.228439	0.001715	1.7733	-3.528008
8.93	-0.0067	0.0073	2.7221	0.1236	1.1769	0.336464	3.203662	0.001888	1.3851	-3.333745
8.94	-0.0059	0.0081	3.0217	0.1270	1.0176	0.383796	3.07472	0.002049	1.0354	-2.94522
8.95	-0.0079	0.0069	2.5723	0.1299	0.8542	0.334192	2.197158	0.002193	0.7296	-3.916533
8.96	-0.0090	0.0089	3.3213	0.1323	0.6874	0.439457	2.283109	0.002316	0.4725	-4.499321
8.97	-0.0055	0.0069	2.5723	0.1342	0.5179	0.345166	1.33231	0.002416	0.2683	-2.750957
8.98	-0.0090	0.0089	3.3213	0.1355	0.3464	0.450134	1.150628	0.002489	0.1200	-4.499321
8.99	-0.0059	0.0061	2.2727	0.1363	0.1736	0.309849	0.39445	0.002534	0.0301	-2.94522
9	-0.0079	0.0077	2.8719	0.1366	0.0000	0.392319	7.35E-12	0.002549	0.0000	-3.916533
9.01	-0.0055	0.0089	3.3213	0.1363	-0.1736	0.452816	-0.576451	0.002534	0.0301	-2.750957
9.02	-0.0130	0.0065	2.4225	0.1355	-0.3464	0.328317	-0.839241	0.002489	0.1200	-6.441949
9.03	-0.0059	0.0081	3.0217	0.1342	-0.5179	0.405471	-1.565082	0.002416	0.2683	-2.94522
9.04	-0.0059	0.0045	1.6735	0.1323	-0.6874	0.221423	-1.15036	0.002316	0.4725	-2.94522
9.05	-0.0087	0.0085	3.1715	0.1299	-0.8542	0.412042	-2.708988	0.002193	0.7296	-4.305059
9.06	-0.0075	0.0057	2.1229	0.1270	-1.0176	0.269633	-2.160125	0.002049	1.0354	-3.722271
9.07	-0.0067	0.0073	2.7221	0.1236	-1.1769	0.336464	-3.203662	0.001888	1.3851	-3.333745
9.08	-0.0028	0.0073	2.7221	0.1197	-1.3316	0.325859	-3.624827	0.001715	1.7733	-1.391118
9.09	-0.0083	0.0061	2.2727	0.1153	-1.4811	0.262132	-3.366062	0.001534	2.1937	-4.110796
9.1	-0.0075	0.0077	2.8719	0.1105	-1.6247	0.317393	-4.666022	0.001350	2.6397	-3.722271
9.11	-0.0075	0.0081	3.0217	0.1053	-1.7619	0.318055	-5.324014	0.001166	3.1044	-3.722271
9.12	-0.0051	0.0069	2.5723	0.0996	-1.8922	0.256153	-4.867235	0.000988	3.5804	-2.556694
9.13	-0.0016	0.0061	2.2727	0.0935	-2.0150	0.212526	-4.579378	0.000818	4.0601	-0.808329
9.14	-0.0048	0.0065	2.4225	0.0871	-2.1298	0.21094	-5.159414	0.000660	4.5361	-2.362431
9.15	-0.0071	0.0069	2.5723	0.0803	-2.2362	0.206542	-5.752235	0.000518	5.0008	-3.528008
9.16	-0.0044	0.0061	2.2727	0.0732	-2.3338	0.166354	-5.304065	0.000392	5.4468	-2.168169
9.17	-0.0063	0.0097	3.6209	0.0658	-2.4222	0.238294	-8.770695	0.000285	5.8672	-3.139482

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9.18	-0.0032	0.0073	2.7221	0.0582	-2.5011	0.158328	-6.808129	0.000197	6.2554	-1.58538
9.19	-0.0067	0.0061	2.2727	0.0503	-2.5700	0.114289	-5.840852	0.000127	6.6051	-3.333745
9.2	-0.0079	0.0077	2.8719	0.0422	-2.6289	0.121233	-7.549782	0.000075	6.9109	-3.916533
9.21	-0.0071	0.0065	2.4225	0.0340	-2.6773	0.082298	-6.485705	0.000039	7.1680	-3.528008
9.22	-0.0079	0.0069	2.5723	0.0256	-2.7152	0.065844	-6.984213	0.000017	7.3722	-3.916533
9.23	-0.0059	0.0073	2.7221	0.0171	-2.7424	0.046606	-7.464902	0.000005	7.5205	-2.94522
9.24	-0.0063	0.0069	2.5723	0.0086	-2.7587	0.022064	-7.096123	0.000001	7.6104	-3.139482
9.25	-0.0067	0.0077	2.8719	0.0000	-2.7641	3.77E-13	-7.938311	0.000000	7.6405	-3.333745
9.26	-0.0063	0.0065	2.4225	-0.0086	-2.7587	-0.020779	-6.682862	-0.000001	7.6104	-3.139482
9.27	-0.0087	0.0081	3.0217	-0.0171	-2.7424	-0.051735	-8.286529	-0.000005	7.5205	-4.305059
9.28	-0.0063	0.0069	2.5723	-0.0256	-2.7152	-0.065844	-6.984213	-0.000017	7.3722	-3.139482
9.29	-0.0071	0.0045	1.6735	-0.0340	-2.6773	-0.056852	-4.480357	-0.000039	7.1680	-3.528008
9.3	-0.0051	0.0085	3.1715	-0.0422	-2.6289	-0.133881	-8.337407	-0.000075	6.9109	-2.556694
9.31	-0.0055	0.0053	1.9731	-0.0503	-2.5700	-0.099222	-5.070851	-0.000127	6.6051	-2.750957
9.32	-0.0059	0.0069	2.5723	-0.0582	-2.5011	-0.149615	-6.433459	-0.000197	6.2554	-2.94522
9.33	-0.0106	0.0073	2.7221	-0.0658	-2.4222	-0.179142	-6.593535	-0.000285	5.8672	-5.276373
9.34	-0.0032	0.0077	2.8719	-0.0732	-2.3338	-0.210215	-6.702538	-0.000392	5.4468	-1.58538
9.35	-0.0044	0.0065	2.4225	-0.0803	-2.2362	-0.194514	-5.417238	-0.000518	5.0008	-2.168169
9.36	-0.0075	0.0073	2.7221	-0.0871	-2.1298	-0.237029	-5.797521	-0.000660	4.5361	-3.722271
9.37	-0.0051	0.0081	3.0217	-0.0935	-2.0150	-0.282569	-6.08863	-0.000818	4.0601	-2.556694
9.38	-0.0063	0.0077	2.8719	-0.0996	-1.8922	-0.285988	-5.434148	-0.000988	3.5804	-3.139482
9.39	-0.0051	0.0073	2.7221	-0.1053	-1.7619	-0.286519	-4.796126	-0.001166	3.1044	-2.556694
9.4	-0.0067	0.0073	2.7221	-0.1105	-1.6247	-0.300837	-4.422633	-0.001350	2.6397	-3.333745
9.41	-0.0059	0.0069	2.5723	-0.1153	-1.4811	-0.296689	-3.809811	-0.001534	2.1937	-2.94522
9.42	-0.0051	0.0057	2.1229	-0.1197	-1.3316	-0.254127	-2.826891	-0.001715	1.7733	-2.556694
9.43	-0.0044	0.0097	3.6209	-0.1236	-1.1769	-0.447563	-4.261499	-0.001888	1.3851	-2.168169
9.44	-0.0075	0.0069	2.5723	-0.1270	-1.0176	-0.326715	-2.617422	-0.002049	1.0354	-3.722271
9.45	-0.0055	0.0057	2.1229	-0.1299	-0.8542	-0.275804	-1.813286	-0.002193	0.7296	-2.750957
9.46	-0.0087	0.0053	1.9731	-0.1323	-0.6874	-0.261066	-1.356315	-0.002316	0.4725	-4.305059
9.47	-0.0055	0.0069	2.5723	-0.1342	-0.5179	-0.345166	-1.33231	-0.002416	0.2683	-2.750957
9.48	-0.0106	0.0073	2.7221	-0.1355	-0.3464	-0.368922	-0.943036	-0.002489	0.1200	-5.276373
9.49	-0.0051	0.0093	3.4711	-0.1363	-0.1736	-0.47324	-0.602452	-0.002534	0.0301	-2.556694
9.5	-0.0079	0.0065	2.4225	-0.1366	0.0000	-0.330926	-6.65E-12	-0.002549	0.0000	-3.916533
9.51	-0.0090	0.0077	2.8719	-0.1363	0.1736	-0.391545	0.498451	-0.002534	0.0301	-4.499321
9.52	-0.0028	0.0073	2.7221	-0.1355	0.3464	-0.368922	0.943036	-0.002489	0.1200	-1.391118
9.53	-0.0094	0.0057	2.1229	-0.1342	0.5179	-0.284861	1.099538	-0.002416	0.2683	-4.693584
9.54	-0.0044	0.0077	2.8719	-0.1323	0.6874	-0.379993	1.974178	-0.002316	0.4725	-2.168169
9.55	-0.0055	0.0057	2.1229	-0.1299	0.8542	-0.275804	1.813286	-0.002193	0.7296	-2.750957
9.56	-0.0133	0.0101	3.7707	-0.1270	1.0176	-0.478931	3.836883	-0.002049	1.0354	-6.636212
9.57	-0.0063	0.0053	1.9731	-0.1236	1.1769	-0.243881	2.322132	-0.001888	1.3851	-3.139482
9.58	-0.0106	0.0101	3.7707	-0.1197	1.3316	-0.451389	5.021214	-0.001715	1.7733	-5.276373
9.59	-0.0051	0.0089	3.3213	-0.1153	1.4811	-0.383081	4.919183	-0.001534	2.1937	-2.556694
9.6	-0.0067	0.0073	2.7221	-0.1105	1.6247	-0.300837	4.422633	-0.001350	2.6397	-3.333745
9.61	-0.0036	0.0057	2.1229	-0.1053	1.7619	-0.223447	3.740352	-0.001166	3.1044	-1.779643
9.62	-0.0075	0.0065	2.4225	-0.0996	1.8922	-0.241235	4.583779	-0.000988	3.5804	-3.722271
9.63	-0.0090	0.0057	2.1229	-0.0935	2.0150	-0.198517	4.277528	-0.000818	4.0601	-4.499321
9.64	-0.0059	0.0065	2.4225	-0.0871	2.1298	-0.21094	5.159414	-0.000660	4.5361	-2.94522
9.65	-0.0067	0.0073	2.7221	-0.0803	2.2362	-0.218571	6.087232	-0.000518	5.0008	-3.333745
9.66	-0.0063	0.0049	1.8233	-0.0732	2.3338	-0.133458	4.25521	-0.000392	5.4468	-3.139482
9.67	-0.0079	0.0061	2.2727	-0.0658	2.4222	-0.149566	5.504955	-0.000285	5.8672	-3.916533
9.68	-0.0008	0.0069	2.5723	-0.0582	2.5011	-0.149615	6.433459	-0.000197	6.2554	-0.419804
9.69	-0.0090	0.0097	3.6209	-0.0503	2.5700	-0.182089	9.305858	-0.000127	6.6051	-4.499321
9.7	-0.0036	0.0045	1.6735	-0.0422	2.6289	-0.070643	4.399285	-0.000075	6.9109	-1.779643
9.71	-0.0051	0.0057	2.1229	-0.0340	2.6773	-0.07212	5.683566	-0.000039	7.1680	-2.556694
9.72	-0.0071	0.0069	2.5723	-0.0256	2.7152	-0.065844	6.984213	-0.000017	7.3722	-3.528008
9.73	-0.0051	0.0081	3.0217	-0.0171	2.7424	-0.051735	8.286529	-0.000005	7.5205	-2.556694
9.74	-0.0055	0.0073	2.7221	-0.0086	2.7587	-0.023349	7.509385	-0.000001	7.6104	-2.750957
9.75	-0.0067	0.0097	3.6209	0.0000	2.7641	-5.08E-13	10.0087	0.000000	7.6405	-3.333745
9.76	-0.0079	0.0089	3.3213	0.0086	2.7587	0.028489	9.162432	0.000001	7.6104	-3.916533
9.77	-0.0071	0.0061	2.2727	0.0171	2.7424	0.038911	6.232461	0.000005	7.5205	-3.528008
9.78	-0.0063	0.0097	3.6209	0.0256	2.7152	0.092686	9.831423	0.000017	7.3722	-3.139482
9.79	-0.0067	0.0109	4.0703	0.0340	2.6773	0.13828	10.89747	0.000039	7.1680	-3.333745
9.8	-0.0051	0.0093	3.4711	0.0422	2.6289	0.146528	9.125032	0.000075	6.9109	-2.556694
9.81	-0.0055	0.0081	3.0217	0.0503	2.5700	0.151956	7.765856	0.000127	6.6051	-2.750957
9.82	-0.0067	0.0045	1.6735	0.0582	2.5011	0.097335	4.185442	0.000197	6.2554	-3.333745
9.83	-0.0055	0.0053	1.9731	0.0658	2.4222	0.129849	4.779236	0.000285	5.8672	-2.750957
9.84	-0.0059	0.0057	2.1229	0.0732	2.3338	0.155389	4.954447	0.000392	5.4468	-2.94522
9.85	-0.0067	0.0053	1.9731	0.0803	2.2362	0.158428	4.412249	0.000518	5.0008	-3.333745
9.86	-0.0122	0.0081	3.0217	0.0871	2.1298	0.263118	6.435627	0.000660	4.5361	-6.053424
9.87	-0.0040	0.0077	2.8719	0.0935	2.0150	0.268561	5.78678	0.000818	4.0601	-1.973906
9.88	-0.0024	0.0089	3.3213	0.0996	1.8922	0.330741	6.284517	0.000988	3.5804	-1.196855

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9.89	-0.0055	0.0101	3.7707	0.1053	1.7619	0.396894	6.643732	0.001166	3.1044	-2.750957
9.9	-0.0067	0.0097	3.6209	0.1105	1.6247	0.400172	5.882969	0.001350	2.6397	-3.333745
9.91	-0.0087	0.0093	3.4711	0.1153	1.4811	0.40036	5.141058	0.001534	2.1937	-4.305059
9.92	-0.0063	0.0065	2.4225	0.1197	1.3316	0.289993	3.225859	0.001715	1.7733	-3.139482
9.93	-0.0024	0.0069	2.5723	0.1236	1.1769	0.317948	3.027356	0.001888	1.3851	-1.196855
9.94	-0.0075	0.0085	3.1715	0.1270	1.0176	0.402823	3.227152	0.002049	1.0354	-3.722271
9.95	-0.0055	0.0073	2.7221	0.1299	0.8542	0.353655	2.325116	0.002193	0.7296	-2.750957
9.96	-0.0071	0.0077	2.8719	0.1323	0.6874	0.379993	1.974178	0.002316	0.4725	-3.528008
9.97	-0.0083	0.0057	2.1229	0.1342	0.5179	0.284861	1.099538	0.002416	0.2683	-4.110796
9.98	-0.0063	0.0069	2.5723	0.1355	0.3464	0.34862	0.891139	0.002489	0.1200	-3.139482
9.99	-0.0067	0.0049	1.8233	0.1363	0.1736	0.248578	0.316449	0.002534	0.0301	-3.333745
10	-0.0680	0.0077	2.8719	0.1366	0.0000	0.392319	8.42E-12	0.002549	0.0000	-33.81562
		rata-rata	4.5197		0.3740					-0.26718
			max	0.1366	rata-rata	0.133976	1.32368	0.00204	0.0764	

A= 65.52385 B= 17.3245
cd= 1.290 cm = 2.137

Kc 1.344554 Cl = 1.013

silinder tegak H6

Model : SILINDER
Posisi : -
H : 6 Cm

Perioda : 1 detik
waktu : 10 detik

t	trans	longitu	F long	u	u dot	F*u	F* u dot	u^3	u dot^2	F trans
det	Eta 2	Eta 1	N	m/det	m/det^2					N
0.01	-0.009829	0.010913	4.0703	0.2129	-0.2705	0.866522	-1.101214	0.009648	0.0732	-4.887847
0.02	-0.005532	0.006495	2.4225	0.2116	-0.5400	0.512662	-1.308203	0.009478	0.2916	-2.750957
0.03	-0.0079	0.0077	2.8719	0.2095	-0.8074	0.601749	-2.318692	0.009199	0.6519	-3.916533
0.04	-0.0090	0.0065	2.4225	0.2066	-1.0715	0.500502	-2.595776	0.008819	1.1482	-4.499321
0.05	-0.0079	0.0077	2.8719	0.2029	-1.3315	0.582617	-3.823835	0.008349	1.7728	-3.916533
0.06	-0.0102	0.0065	2.4225	0.1983	-1.5862	0.480449	-3.842411	0.007801	2.5159	-5.08211
0.07	-0.0044	0.0093	3.4711	0.1930	-1.8346	0.66995	-6.367974	0.007190	3.3656	-2.168169
0.08	-0.0055	0.0061	2.2727	0.1869	-2.0757	0.424818	-4.717495	0.006531	4.3087	-2.750957
0.09	-0.0051	0.0041	1.5237	0.1801	-2.3087	0.274415	-3.517714	0.005842	5.3303	-2.556694
0.1	-0.0059	0.0081	3.0217	0.1726	-2.5326	0.521455	-7.652761	0.005139	6.4141	-2.94522
0.11	-0.0032	0.0053	1.9731	0.1644	-2.7465	0.324288	-5.419004	0.004440	7.5432	-1.58538
0.12	-0.0055	0.0085	3.1715	0.1555	-2.9495	0.493154	-9.354417	0.003760	8.6997	-2.750957
0.13	-0.0063	0.0085	3.1715	0.1460	-3.1409	0.463102	-9.961442	0.003113	9.8655	-3.139482
0.14	-0.0044	0.0065	2.4225	0.1360	-3.3199	0.32938	-8.042464	0.002514	11.0220	-2.168169
0.15	-0.0055	0.0049	1.8233	0.1254	-3.4858	0.228601	-6.355595	0.001971	12.1511	-2.750957
0.16	-0.0051	0.0089	3.3213	0.1143	-3.6380	0.379614	-12.08282	0.001493	13.2349	-2.556694
0.17	-0.0051	0.0101	3.7707	0.1028	-3.7758	0.387487	-14.23733	0.001085	14.2565	-2.556694
0.18	-0.0126	0.0081	3.0217	0.0908	-3.8987	0.274438	-11.78054	0.000749	15.1995	-6.247686
0.19	-0.0040	0.0073	2.7221	0.0785	-4.0062	0.21375	-10.9051	0.000484	16.0493	-1.973906
0.2	-0.0051	0.0049	1.8233	0.0659	-4.0979	0.120182	-7.471451	0.000286	16.7924	-2.556694
0.21	-0.0075	0.0077	2.8719	0.0530	-4.1734	0.152347	-11.98543	0.000149	17.4170	-3.722271
0.22	-0.0067	0.0073	2.7221	0.0400	-4.2324	0.108802	-11.52098	0.000064	17.9133	-3.333745
0.23	-0.0126	0.0093	3.4711	0.0267	-4.2748	0.092799	-14.83811	0.000019	18.2736	-6.247686
0.24	-0.0090	0.0081	3.0217	0.0134	-4.3002	0.040472	-12.99396	0.000002	18.4920	-4.499321
0.25	-0.0083	0.0081	3.0217	0.0000	-4.3087	-2.47E-16	-13.01965	0.000000	18.5652	-4.110796
0.26	-0.0071	0.0069	2.5723	-0.0134	-4.3002	-0.034453	-11.06139	-0.000002	18.4920	-3.528008
0.27	-0.0122	0.0077	2.8719	-0.0267	-4.2748	-0.076779	-12.27662	-0.000019	18.2736	-6.053424
0.28	-0.0094	0.0065	2.4225	-0.0400	-4.2324	-0.096827	-10.25292	-0.000064	17.9133	-4.693584
0.29	-0.0079	0.0069	2.5723	-0.0530	-4.1734	-0.136454	-10.73506	-0.000149	17.4170	-3.916533
0.3	-0.0110	0.0101	3.7707	-0.0659	-4.0979	-0.248551	-15.45179	-0.000286	16.7924	-5.470635
0.31	-0.0063	0.0065	2.4225	-0.0785	-4.0062	-0.190223	-9.704822	-0.000484	16.0493	-3.139482
0.32	-0.0071	0.0101	3.7707	-0.0908	-3.8987	-0.342466	-14.7007	-0.000749	15.1995	-3.528008
0.33	-0.0083	0.0097	3.6209	-0.1028	-3.7758	-0.372093	-13.67171	-0.001085	14.2565	-4.110796
0.34	-0.0036	0.0069	2.5723	-0.1143	-3.6380	-0.294003	-9.35791	-0.001493	13.2349	-1.779643
0.35	-0.0083	0.0073	2.7221	-0.1254	-3.4858	-0.341295	-9.48874	-0.001971	12.1511	-4.110796
0.36	-0.0079	0.0057	2.1229	-0.1360	-3.3199	-0.288643	-7.047788	-0.002514	11.0220	-3.916533
0.37	-0.0098	0.0089	3.3213	-0.1460	-3.1409	-0.484977	-10.43197	-0.003113	9.8655	-4.887847
0.38	-0.0079	0.0089	3.3213	-0.1555	-2.9495	-0.516448	-9.796267	-0.003760	8.6997	-3.916533
0.39	-0.0075	0.0097	3.6209	-0.1644	-2.7465	-0.595123	-9.944776	-0.004440	7.5432	-3.722271
0.4	-0.0067	0.0109	4.0703	-0.1726	-2.5326	-0.702417	-10.30852	-0.005139	6.4141	-3.333745
0.41	-0.0075	0.0077	2.8719	-0.1801	-2.3087	-0.517235	-6.630423	-0.005842	5.3303	-3.722271
0.42	-0.0087	0.0069	2.5723	-0.1869	-2.0757	-0.480822	-5.339403	-0.006531	4.3087	-4.305059
0.43	-0.0055	0.0069	2.5723	-0.1930	-1.8346	-0.49647	-4.719024	-0.007190	3.3656	-2.750957
0.44	-0.0067	0.0089	3.3213	-0.1983	-1.5862	-0.658713	-5.268076	-0.007801	2.5159	-3.333745
0.45	-0.0090	0.0057	2.1229	-0.2029	-1.3315	-0.430665	-2.82654	-0.008349	1.7728	-4.499321
0.46	-0.0118	0.0125	4.6695	-0.2066	-1.0715	-0.964761	-5.003579	-0.008819	1.1482	-5.859161
0.47	-0.0083	0.0089	3.3213	-0.2095	-0.8074	-0.695914	-2.681536	-0.009199	0.6519	-4.110796
0.48	-0.0102	0.0073	2.7221	-0.2116	-0.5400	-0.576067	-1.469999	-0.009478	0.2916	-5.08211
0.49	-0.0051	0.0089	3.3213	-0.2129	-0.2705	-0.707065	-0.898569	-0.009648	0.0732	-2.556694
0.5	-0.0079	0.0081	3.0217	-0.2133	0.0000	-0.644554	1.58E-14	-0.009706	0.0000	-3.916533
0.51	-0.0075	0.0073	2.7221	-0.2129	0.2705	-0.5795	0.736453	-0.009648	0.0732	-3.722271
0.52	-0.0098	0.0073	2.7221	-0.2116	0.5400	-0.576067	1.469999	-0.009478	0.2916	-4.887847
0.53	-0.0094	0.0081	3.0217	-0.2095	0.8074	-0.633138	2.43964	-0.009199	0.6519	-4.693584
0.54	-0.0083	0.0101	3.7707	-0.2066	1.0715	-0.779057	4.040458	-0.008819	1.1482	-4.110796
0.55	-0.0055	0.0073	2.7221	-0.2029	1.3315	-0.552227	3.624376	-0.008349	1.7728	-2.750957
0.56	-0.0059	0.0073	2.7221	-0.1983	1.5862	-0.53987	4.317633	-0.007801	2.5159	-2.94522
0.57	-0.0063	0.0093	3.4711	-0.1930	1.8346	-0.66995	6.367974	-0.007190	3.3656	-3.139482
0.58	-0.0083	0.0089	3.3213	-0.1869	2.0757	-0.620831	6.894175	-0.006531	4.3087	-4.110796
0.59	-0.0090	0.0069	2.5723	-0.1801	2.3087	-0.463275	5.93871	-0.005842	5.3303	-4.499321
0.6	-0.0051	0.0057	2.1229	-0.1726	2.5326	-0.366345	5.376398	-0.005139	6.4141	-2.556694
0.61	-0.0055	0.0061	2.2727	-0.1644	2.7465	-0.373531	6.241871	-0.004440	7.5432	-2.750957
0.62	-0.0079	0.0081	3.0217	-0.1555	2.9495	-0.46986	8.912567	-0.003760	8.6997	-3.916533
0.63	-0.0098	0.0089	3.3213	-0.1460	3.1409	-0.484977	10.43197	-0.003113	9.8655	-4.887847
0.64	-0.0098	0.0073	2.7221	-0.1360	3.3199	-0.370117	9.03714	-0.002514	11.0220	-4.887847
0.65	-0.0075	0.0089	3.3213	-0.1254	3.4858	-0.416424	11.5775	-0.001971	12.1511	-3.722271

0.66	-0.0075	0.0073	2.7221	-0.1143	3.6380	-0.311125	9.902892	-0.001493	13.2349	-3.722271
0.67	-0.0051	0.0077	2.8719	-0.1028	3.7758	-0.295122	10.84359	-0.001085	14.2565	-2.556694
0.68	-0.0087	0.0085	3.1715	-0.0908	3.8987	-0.288043	12.36457	-0.000749	15.1995	-4.305059
0.69	-0.0075	0.0057	2.1229	-0.0785	4.0062	-0.166697	8.504549	-0.000484	16.0493	-3.722271
0.7	-0.0067	0.0077	2.8719	-0.0659	4.0979	-0.189304	11.76856	-0.000286	16.7924	-3.333745
0.71	-0.0090	0.0093	3.4711	-0.0530	4.1734	-0.184134	14.48617	-0.000149	17.4170	-4.499321
0.72	-0.0059	0.0065	2.4225	-0.0400	4.2324	-0.096827	10.25292	-0.000064	17.9133	-2.94522
0.73	-0.0028	0.0077	2.8719	-0.0267	4.2748	-0.076779	12.27662	-0.000019	18.2736	-1.391118
0.74	-0.0048	0.0069	2.5723	-0.0134	4.3002	-0.034453	11.06139	-0.000002	18.4920	-2.362431
0.75	-0.0087	0.0061	2.2727	0.0000	4.3087	1.2E-15	9.792338	0.000000	18.5652	-4.305059
0.76	-0.0059	0.0077	2.8719	0.0134	4.3002	0.038465	12.34977	0.000002	18.4920	-2.94522
0.77	-0.0059	0.0061	2.2727	0.0267	4.2748	0.060759	9.715122	0.000019	18.2736	-2.94522
0.78	-0.0036	0.0073	2.7221	0.0400	4.2324	0.108802	11.52098	0.000064	17.9133	-1.779643
0.79	-0.0055	0.0093	3.4711	0.0530	4.1734	0.184134	14.48617	0.000149	17.4170	-2.750957
0.8	-0.0079	0.0081	3.0217	0.0659	4.0979	0.199178	12.38243	0.000286	16.7924	-3.916533
0.81	-0.0071	0.0093	3.4711	0.0785	4.0062	0.272566	13.90578	0.000484	16.0493	-3.528008
0.82	-0.0087	0.0077	2.8719	0.0908	3.8987	0.260832	11.1965	0.000749	15.1995	-4.305059
0.83	-0.0102	0.0089	3.3213	0.1028	3.7758	0.341305	12.54046	0.001085	14.2565	-5.08211
0.84	-0.0094	0.0065	2.4225	0.1143	3.6380	0.276881	8.812927	0.001493	13.2349	-4.693584
0.85	-0.0094	0.0097	3.6209	0.1254	3.4858	0.453989	12.62189	0.001971	12.1511	-4.693584
0.86	-0.0051	0.0105	3.9205	0.1360	3.3199	0.533066	13.01585	0.002514	11.0220	-2.556694
0.87	-0.0090	0.0069	2.5723	0.1460	3.1409	0.375605	8.079352	0.003113	9.8655	-4.499321
0.88	-0.0071	0.0097	3.6209	0.1555	2.9495	0.563035	10.67997	0.003760	8.6997	-3.528008
0.89	-0.0122	0.0085	3.1715	0.1644	2.7465	0.521259	8.710474	0.004440	7.5432	-6.053424
0.9	-0.0063	0.0089	3.3213	0.1726	2.5326	0.573159	8.411549	0.005139	6.4141	-3.139482
0.91	-0.0044	0.0081	3.0217	0.1801	2.3087	0.544215	6.97628	0.005842	5.3303	-2.168169
0.92	-0.0075	0.0057	2.1229	0.1869	2.0757	0.396816	4.406541	0.006531	4.3087	-3.722271
0.93	-0.0071	0.0097	3.6209	0.1930	1.8346	0.698863	6.642799	0.007190	3.3656	-3.528008
0.94	-0.0071	0.0061	2.2727	0.1983	1.5862	0.450739	3.6048	0.007801	2.5159	-3.528008
0.95	-0.0055	0.0073	2.7221	0.2029	1.3315	0.552227	3.624376	0.008349	1.7728	-2.750957
0.96	-0.0055	0.0081	3.0217	0.2066	1.0715	0.624304	3.237856	0.008819	1.1482	-2.750957
0.97	-0.0075	0.0105	3.9205	0.2095	0.8074	0.821468	3.165327	0.009199	0.6519	-3.722271
0.98	-0.0118	0.0069	2.5723	0.2116	0.5400	0.544364	1.389101	0.009478	0.2916	-5.859161
0.99	-0.0087	0.0105	3.9205	0.2129	0.2705	0.834631	1.060685	0.009648	0.0732	-4.305059
1	-0.0075	0.0089	3.3213	0.2133	0.0000	0.708463	-6E-14	0.009706	0.0000	-3.722271
1.01	-0.0036	0.0089	3.3213	0.2129	-0.2705	0.707065	-0.898569	0.009648	0.0732	-1.779643
1.02	-0.0090	0.0105	3.9205	0.2116	-0.5400	0.829687	-2.117184	0.009478	0.2916	-4.499321
1.03	-0.0071	0.0085	3.1715	0.2095	-0.8074	0.664526	-2.560588	0.009199	0.6519	-3.528008
1.04	-0.0087	0.0081	3.0217	0.2066	-1.0715	0.624304	-3.237856	0.008819	1.1482	-4.305059
1.05	-0.0083	0.0097	3.6209	0.2029	-1.3315	0.73457	-4.821131	0.008349	1.7728	-4.110796
1.06	-0.0079	0.0105	3.9205	0.1983	-1.5862	0.777555	-6.21852	0.007801	2.5159	-3.916533
1.07	-0.0110	0.0105	3.9205	0.1930	-1.8346	0.75669	-7.192449	0.007190	3.3656	-5.470635
1.08	-0.0098	0.0109	4.0703	0.1869	-2.0757	0.760841	-8.448947	0.006531	4.3087	-4.887847
1.09	-0.0063	0.0065	2.4225	0.1801	-2.3087	0.436295	-5.592853	0.005842	5.3303	-3.139482
1.1	-0.0087	0.0089	3.3213	0.1726	-2.5326	0.573159	-8.411549	0.005139	6.4141	-4.305059
1.11	-0.0063	0.0085	3.1715	0.1644	-2.7465	0.521259	-8.710474	0.004440	7.5432	-3.139482
1.12	-0.0067	0.0113	4.2201	0.1555	-2.9495	0.65621	-12.44737	0.003760	8.6997	-3.333745
1.13	-0.0044	0.0097	3.6209	0.1460	-3.1409	0.528725	-11.37301	0.003113	9.8655	-2.168169
1.14	-0.0098	0.0085	3.1715	0.1360	-3.3199	0.431223	-10.52915	0.002514	11.0220	-4.887847
1.15	-0.0067	0.0089	3.3213	0.1254	-3.4858	0.416424	-11.5775	0.001971	12.1511	-3.333745
1.16	-0.0051	0.0065	2.4225	0.1143	-3.6380	0.276881	-8.812927	0.001493	13.2349	-2.556694
1.17	-0.0036	0.0097	3.6209	0.1028	-3.7758	0.372093	-13.67171	0.001085	14.2565	-1.779643
1.18	-0.0028	0.0093	3.4711	0.0908	-3.8987	0.315255	-13.53263	0.000749	15.1995	-1.391118
1.19	-0.0055	0.0101	3.7707	0.0785	-4.0062	0.296092	-15.10605	0.000484	16.0493	-2.750957
1.2	-0.0102	0.0085	3.1715	0.0659	-4.0979	0.209053	-12.9963	0.000286	16.7924	-5.08211
1.21	-0.0059	0.0081	3.0217	0.0530	-4.1734	0.160294	-12.61062	0.000149	17.4170	-2.94522
1.22	-0.0083	0.0077	2.8719	0.0400	-4.2324	0.11479	-12.15501	0.000064	17.9133	-4.110796
1.23	-0.0051	0.0077	2.8719	0.0267	-4.2748	0.076779	-12.27662	0.000019	18.2736	-2.556694
1.24	-0.0048	0.0073	2.7221	0.0134	-4.3002	0.036459	-11.70558	0.000002	18.4920	-2.362431
1.25	-0.0012	0.0077	2.8719	0.0000	-4.3087	-3.08E-15	-12.37419	0.000000	18.5652	-0.614067
1.26	-0.0102	0.0105	3.9205	-0.0134	-4.3002	-0.052511	-16.8591	-0.000002	18.4920	-5.08211
1.27	-0.0075	0.0105	3.9205	-0.0267	-4.2748	-0.104814	-16.75923	-0.000019	18.2736	-3.722271
1.28	-0.0067	0.0069	2.5723	-0.0400	-4.2324	-0.102814	-10.88695	-0.000064	17.9133	-3.333745
1.29	-0.0040	0.0065	2.4225	-0.0530	-4.1734	-0.128507	-10.10988	-0.000149	17.4170	-1.973906
1.3	-0.0051	0.0065	2.4225	-0.0659	-4.0979	-0.15968	-9.926939	-0.000286	16.7924	-2.556694
1.31	-0.0106	0.0081	3.0217	-0.0785	-4.0062	-0.237276	-12.10537	-0.000484	16.0493	-5.276373
1.32	-0.0075	0.0105	3.9205	-0.0908	-3.8987	-0.356071	-15.28473	-0.000749	15.1995	-3.722271
1.33	-0.0110	0.0105	3.9205	-0.1028	-3.7758	-0.402882	-14.80295	-0.001085	14.2565	-5.470635
1.34	-0.0063	0.0081	3.0217	-0.1143	-3.6380	-0.345369	-10.99286	-0.001493	13.2349	-3.139482
1.35	-0.0059	0.0073	2.7221	-0.1254	-3.4858	-0.341295	-9.48874	-0.001971	12.1511	-2.94522
1.36	-0.0044	0.0053	1.9731	-0.1360	-3.3199	-0.268275	-6.55045	-0.002514	11.0220	-2.168169

silinder tegak H6

1.37	-0.0075	0.0093	3.4711	-0.1460	-3.1409	-0.506851	-10.90249	-0.003113	9.8655	-3.722271
1.38	-0.0075	0.0073	2.7221	-0.1555	-2.9495	-0.423272	-8.028867	-0.003760	8.6997	-3.722271
1.39	-0.0083	0.0057	2.1229	-0.1644	-2.7465	-0.34891	-5.830437	-0.004440	7.5432	-4.110796
1.4	-0.0094	0.0073	2.7221	-0.1726	-2.5326	-0.469752	-6.893973	-0.005139	6.4141	-4.693584
1.41	-0.0079	0.0081	3.0217	-0.1801	-2.3087	-0.544215	-6.97628	-0.005842	5.3303	-3.916533
1.42	-0.0075	0.0089	3.3213	-0.1869	-2.0757	-0.620831	-6.894175	-0.006531	4.3087	-3.722271
1.43	-0.0094	0.0077	2.8719	-0.1930	-1.8346	-0.554297	-5.268674	-0.007190	3.3656	-4.693584
1.44	-0.0087	0.0077	2.8719	-0.1983	-1.5862	-0.569581	-4.555244	-0.007801	2.5159	-4.305059
1.45	-0.0067	0.0085	3.1715	-0.2029	-1.3315	-0.643398	-4.222754	-0.008349	1.7728	-3.333745
1.46	-0.0094	0.0077	2.8719	-0.2066	-1.0715	-0.593354	-3.077336	-0.008819	1.1482	-4.693584
1.47	-0.0067	0.0061	2.2727	-0.2095	-0.8074	-0.476195	-1.834901	-0.009199	0.6519	-3.333745
1.48	-0.0083	0.0093	3.4711	-0.2116	-0.5400	-0.734579	-1.874489	-0.009478	0.2916	-4.110796
1.49	-0.0063	0.0085	3.1715	-0.2129	-0.2705	-0.675174	-0.85804	-0.009648	0.0732	-3.139482
1.5	-0.0083	0.0081	3.0217	-0.2133	0.0000	-0.644554	8.77E-14	-0.009706	0.0000	-4.110796
1.51	-0.0044	0.0077	2.8719	-0.2129	0.2705	-0.611391	0.776982	-0.009648	0.0732	-2.168169
1.52	-0.0059	0.0093	3.4711	-0.2116	0.5400	-0.734579	1.874489	-0.009478	0.2916	-2.94522
1.53	-0.0063	0.0049	1.8233	-0.2095	0.8074	-0.38203	1.472058	-0.009199	0.6519	-3.139482
1.54	-0.0075	0.0093	3.4711	-0.2066	1.0715	-0.717156	3.719417	-0.008819	1.1482	-3.722271
1.55	-0.0075	0.0089	3.3213	-0.2029	1.3315	-0.673789	4.422213	-0.008349	1.7728	-3.722271
1.56	-0.0079	0.0105	3.9205	-0.1983	1.5862	-0.777555	6.21852	-0.007801	2.5159	-3.916533
1.57	-0.0063	0.0065	2.4225	-0.1930	1.8346	-0.467557	4.4442	-0.007190	3.3656	-3.139482
1.58	-0.0087	0.0073	2.7221	-0.1869	2.0757	-0.508823	5.650358	-0.006531	4.3087	-4.305059
1.59	-0.0079	0.0081	3.0217	-0.1801	2.3087	-0.544215	6.97628	-0.005842	5.3303	-3.916533
1.6	-0.0075	0.0085	3.1715	-0.1726	2.5326	-0.547307	8.032155	-0.005139	6.4141	-3.722271
1.61	-0.0079	0.0073	2.7221	-0.1644	2.7465	-0.447395	7.476173	-0.004440	7.5432	-3.916533
1.62	-0.0063	0.0057	2.1229	-0.1555	2.9495	-0.330097	6.261467	-0.003760	8.6997	-3.139482
1.63	-0.0051	0.0089	3.3213	-0.1460	3.1409	-0.484977	10.43197	-0.003113	9.8655	-2.556694
1.64	-0.0090	0.0073	2.7221	-0.1360	3.3199	-0.370117	9.03714	-0.002514	11.0220	-4.499321
1.65	-0.0067	0.0073	2.7221	-0.1254	3.4858	-0.341295	9.48874	-0.001971	12.1511	-3.333745
1.66	-0.0040	0.0089	3.3213	-0.1143	3.6380	-0.379614	12.08282	-0.001493	13.2349	-1.973906
1.67	-0.0071	0.0073	2.7221	-0.1028	3.7758	-0.279728	10.27796	-0.001085	14.2565	-3.528008
1.68	-0.0063	0.0081	3.0217	-0.0908	3.8987	-0.274438	11.78054	-0.000749	15.1995	-3.139482
1.69	-0.0090	0.0105	3.9205	-0.0785	4.0062	-0.307856	15.70619	-0.000484	16.0493	-4.499321
1.7	-0.0040	0.0061	2.2727	-0.0659	4.0979	-0.149806	9.313066	-0.000286	16.7924	-1.973906
1.71	-0.0059	0.0097	3.6209	-0.0530	4.1734	-0.192081	15.11136	-0.000149	17.4170	-2.94522
1.72	-0.0059	0.0081	3.0217	-0.0400	4.2324	-0.120777	12.78904	-0.000064	17.9133	-2.94522
1.73	-0.0059	0.0085	3.1715	-0.0267	4.2748	-0.084789	13.55736	-0.000019	18.2736	-2.94522
1.74	-0.0083	0.0081	3.0217	-0.0134	4.3002	-0.040472	12.99396	-0.000002	18.4920	-4.110796
1.75	-0.0059	0.0069	2.5723	0.0000	4.3087	4.64E-15	11.08326	0.000000	18.5652	-2.94522
1.76	-0.0005	0.0085	3.1715	0.0134	4.3002	0.042478	13.63815	0.000002	18.4920	-0.225541
1.77	-0.0079	0.0061	2.2727	0.0267	4.2748	0.060759	9.715122	0.000019	18.2736	-3.916533
1.78	-0.0083	0.0073	2.7221	0.0400	4.2324	0.108802	11.52098	0.000064	17.9133	-4.110796
1.79	-0.0075	0.0097	3.6209	0.0530	4.1734	0.192081	15.11136	0.000149	17.4170	-3.722271
1.8	-0.0118	0.0089	3.3213	0.0659	4.0979	0.218927	13.61017	0.000286	16.7924	-5.859161
1.81	-0.0090	0.0069	2.5723	0.0785	4.0062	0.201987	10.30496	0.000484	16.0493	-4.499321
1.82	-0.0106	0.0073	2.7221	0.0908	3.8987	0.247227	10.61247	0.000749	15.1995	-5.276373
1.83	-0.0094	0.0053	1.9731	0.1028	3.7758	0.202757	7.449844	0.001085	14.2565	-4.693584
1.84	-0.0063	0.0077	2.8719	0.1143	3.6380	0.328247	10.44788	0.001493	13.2349	-3.139482
1.85	-0.0032	0.0057	2.1229	0.1254	3.4858	0.266165	7.399977	0.001971	12.1511	-1.58538
1.86	-0.0044	0.0049	1.8233	0.1360	3.3199	0.247906	6.053112	0.002514	11.0220	-2.168169
1.87	-0.0098	0.0085	3.1715	0.1460	3.1409	0.463102	9.961442	0.003113	9.8655	-4.887847
1.88	-0.0055	0.0089	3.3213	0.1555	2.9495	0.516448	9.796267	0.003760	8.6997	-2.750957
1.89	-0.0067	0.0073	2.7221	0.1644	2.7465	0.447395	7.476173	0.004440	7.5432	-3.333745
1.9	-0.0071	0.0057	2.1229	0.1726	2.5326	0.366345	5.376398	0.005139	6.4141	-3.528008
1.91	-0.0090	0.0105	3.9205	0.1801	2.3087	0.706096	9.05142	0.005842	5.3303	-4.499321
1.92	-0.0094	0.0077	2.8719	0.1869	2.0757	0.536825	5.961312	0.006531	4.3087	-4.693584
1.93	-0.0040	0.0081	3.0217	0.1930	1.8346	0.58321	5.543499	0.007190	3.3656	-1.973906
1.94	-0.0059	0.0069	2.5723	0.1983	1.5862	0.51016	4.080022	0.007801	2.5159	-2.94522
1.95	-0.0102	0.0093	3.4711	0.2029	1.3315	0.704179	4.621672	0.008349	1.7728	-5.08211
1.96	-0.0067	0.0117	4.3699	0.2066	1.0715	0.90286	4.682539	0.008819	1.1482	-3.333745
1.97	-0.0067	0.0081	3.0217	0.2095	0.8074	0.633138	2.43964	0.009199	0.6519	-3.333745
1.98	-0.0083	0.0077	2.8719	0.2116	0.5400	0.607769	1.550897	0.009478	0.2916	-4.110796
1.99	-0.0102	0.0093	3.4711	0.2129	0.2705	0.738957	0.939098	0.009648	0.0732	-5.08211
2	-0.0044	0.0081	3.0217	0.2133	0.0000	0.644554	-1.09E-13	0.009706	0.0000	-2.168169
2.01	-0.0098	0.0045	1.6735	0.2129	-0.2705	0.35626	-0.45275	0.009648	0.0732	-4.887847
2.02	-0.0044	0.0089	3.3213	0.2116	-0.5400	0.702877	-1.793591	0.009478	0.2916	-2.168169
2.03	-0.0055	0.0081	3.0217	0.2095	-0.8074	0.633138	-2.43964	0.009199	0.6519	-2.750957
2.04	-0.0079	0.0093	3.4711	0.2066	-1.0715	0.717156	-3.719417	0.008819	1.1482	-3.916533
2.05	-0.0071	0.0113	4.2201	0.2029	-1.3315	0.856132	-5.618968	0.008349	1.7728	-3.528008
2.06	-0.0055	0.0081	3.0217	0.1983	-1.5862	0.599291	-4.792855	0.007801	2.5159	-2.750957
2.07	-0.0063	0.0077	2.8719	0.1930	-1.8346	0.554297	-5.268674	0.007190	3.3656	-3.139482

2.08	-0.0071	0.0073	2.7221	0.1869	-2.0757	0.508823	-5.650358	0.006531	4.3087	-3.528008
2.09	-0.0071	0.0065	2.4225	0.1801	-2.3087	0.436295	-5.592853	0.005842	5.3303	-3.528008
2.1	-0.0024	0.0065	2.4225	0.1726	-2.5326	0.418049	-6.135186	0.005139	6.4141	-1.196855
2.11	-0.0059	0.0085	3.1715	0.1644	-2.7465	0.521259	-8.710474	0.004440	7.5432	-2.94522
2.12	-0.0059	0.0057	2.1229	0.1555	-2.9495	0.330097	-6.261467	0.003760	8.6997	-2.94522
2.13	-0.0055	0.0089	3.3213	0.1460	-3.1409	0.484977	-10.43197	0.003113	9.8655	-2.750957
2.14	-0.0094	0.0097	3.6209	0.1360	-3.3199	0.492329	-12.02117	0.002514	11.0220	-4.693584
2.15	-0.0067	0.0085	3.1715	0.1254	-3.4858	0.397642	-11.05531	0.001971	12.1511	-3.333745
2.16	-0.0106	0.0061	2.2727	0.1143	-3.6380	0.259759	-8.267944	0.001493	13.2349	-5.276373
2.17	-0.0067	0.0073	2.7221	0.1028	-3.7758	0.279728	-10.27796	0.001085	14.2565	-3.333745
2.18	-0.0075	0.0105	3.9205	0.0908	-3.8987	0.356071	-15.28473	0.000749	15.1995	-3.722271
2.19	-0.0087	0.0077	2.8719	0.0785	-4.0062	0.225513	-11.50523	0.000484	16.0493	-4.305059
2.2	-0.0110	0.0077	2.8719	0.0659	-4.0979	0.189304	-11.76856	0.000286	16.7924	-5.470635
2.21	-0.0083	0.0093	3.4711	0.0530	-4.1734	0.184134	-14.48617	0.000149	17.4170	-4.110796
2.22	-0.0083	0.0081	3.0217	0.0400	-4.2324	0.120777	-12.78904	0.000064	17.9133	-4.110796
2.23	-0.0087	0.0113	4.2201	0.0267	-4.2748	0.112824	-18.03998	0.000019	18.2736	-4.305059
2.24	-0.0040	0.0077	2.8719	0.0134	-4.3002	0.038465	-12.34977	0.000002	18.4920	-1.973906
2.25	-0.0063	0.0077	2.8719	0.0000	-4.3087	1.56E-14	-12.37419	0.000000	18.5652	-3.139482
2.26	-0.0051	0.0097	3.6209	-0.0134	-4.3002	-0.048498	-15.57072	-0.000002	18.4920	-2.556694
2.27	-0.0094	0.0069	2.5723	-0.0267	-4.2748	-0.068769	-10.99587	-0.000019	18.2736	-4.693584
2.28	-0.0094	0.0097	3.6209	-0.0400	-4.2324	-0.144728	-15.32516	-0.000064	17.9133	-4.693584
2.29	-0.0063	0.0081	3.0217	-0.0530	-4.1734	-0.160294	-12.61062	-0.000149	17.4170	-3.139482
2.3	-0.0098	0.0069	2.5723	-0.0659	-4.0979	-0.169555	-10.54081	-0.000286	16.7924	-4.887847
2.31	-0.0063	0.0065	2.4225	-0.0785	-4.0062	-0.190223	-9.704822	-0.000484	16.0493	-3.139482
2.32	-0.0028	0.0065	2.4225	-0.0908	-3.8987	-0.220016	-9.444405	-0.000749	15.1995	-1.391118
2.33	-0.0036	0.0085	3.1715	-0.1028	-3.7758	-0.325911	-11.97483	-0.001085	14.2565	-1.779643
2.34	-0.0079	0.0073	2.7221	-0.1143	-3.6380	-0.311125	-9.902892	-0.001493	13.2349	-3.916533
2.35	-0.0079	0.0085	3.1715	-0.1254	-3.4858	-0.397642	-11.05531	-0.001971	12.1511	-3.916533
2.36	-0.0051	0.0073	2.7221	-0.1360	-3.3199	-0.370117	-9.03714	-0.002514	11.0220	-2.556694
2.37	-0.0071	0.0073	2.7221	-0.1460	-3.1409	-0.397479	-8.549875	-0.003113	9.8655	-3.528008
2.38	-0.0075	0.0081	3.0217	-0.1555	-2.9495	-0.46986	-8.912567	-0.003760	8.6997	-3.722271
2.39	-0.0083	0.0133	4.9691	-0.1644	-2.7465	-0.816715	-13.64768	-0.004440	7.5432	-4.110796
2.4	-0.0087	0.0081	3.0217	-0.1726	-2.5326	-0.521455	-7.652761	-0.005139	6.4141	-4.305059
2.41	-0.0087	0.0045	1.6735	-0.1801	-2.3087	-0.301395	-3.863571	-0.005842	5.3303	-4.305059
2.42	-0.0114	0.0073	2.7221	-0.1869	-2.0757	-0.508823	-5.650358	-0.006531	4.3087	-5.664898
2.43	-0.0087	0.0089	3.3213	-0.1930	-1.8346	-0.641037	-6.093149	-0.007190	3.3656	-4.305059
2.44	-0.0094	0.0089	3.3213	-0.1983	-1.5862	-0.658713	-5.268076	-0.007801	2.5159	-4.693584
2.45	-0.0090	0.0101	3.7707	-0.2029	-1.3315	-0.76496	-5.02059	-0.008349	1.7728	-4.499321
2.46	-0.0063	0.0101	3.7707	-0.2066	-1.0715	-0.779057	-4.040458	-0.008819	1.1482	-3.139482
2.47	-0.0075	0.0121	4.5197	-0.2095	-0.8074	-0.947022	-3.649118	-0.009199	0.6519	-3.722271
2.48	-0.0063	0.0081	3.0217	-0.2116	-0.5400	-0.639472	-1.631795	-0.009478	0.2916	-3.139482
2.49	-0.0051	0.0077	2.8719	-0.2129	-0.2705	-0.611391	-0.776982	-0.009648	0.0732	-2.556694
2.5	-0.0063	0.0077	2.8719	-0.2133	0.0000	-0.6126	-7.33E-13	-0.009706	0.0000	-3.139482
2.51	-0.0102	0.0065	2.4225	-0.2129	0.2705	-0.515717	0.655395	-0.009648	0.0732	-5.08211
2.52	-0.0063	0.0113	4.2201	-0.2116	0.5400	-0.893092	2.27898	-0.009478	0.2916	-3.139482
2.53	-0.0067	0.0097	3.6209	-0.2095	0.8074	-0.758691	2.923431	-0.009199	0.6519	-3.333745
2.54	-0.0063	0.0065	2.4225	-0.2066	1.0715	-0.500502	2.595776	-0.008819	1.1482	-3.139482
2.55	-0.0048	0.0057	2.1229	-0.2029	1.3315	-0.430665	2.82654	-0.008349	1.7728	-2.362431
2.56	-0.0036	0.0089	3.3213	-0.1983	1.5862	-0.658713	5.268076	-0.007801	2.5159	-1.779643
2.57	-0.0098	0.0069	2.5723	-0.1930	1.8346	-0.49647	4.719024	-0.007190	3.3656	-4.887847
2.58	-0.0106	0.0061	2.2727	-0.1869	2.0757	-0.424818	4.717495	-0.006531	4.3087	-5.276373
2.59	-0.0063	0.0093	3.4711	-0.1801	2.3087	-0.625155	8.01385	-0.005842	5.3303	-3.139482
2.6	-0.0102	0.0105	3.9205	-0.1726	2.5326	-0.676566	9.929124	-0.005139	6.4141	-5.08211
2.61	-0.0087	0.0085	3.1715	-0.1644	2.7465	-0.521259	8.710474	-0.004440	7.5432	-4.305059
2.62	-0.0079	0.0069	2.5723	-0.1555	2.9495	-0.399978	7.587017	-0.003760	8.6997	-3.916533
2.63	-0.0071	0.0073	2.7221	-0.1460	3.1409	-0.397479	8.549875	-0.003113	9.8655	-3.528008
2.64	-0.0075	0.0097	3.6209	-0.1360	3.3199	-0.492329	12.02117	-0.002514	11.0220	-3.722271
2.65	-0.0106	0.0093	3.4711	-0.1254	3.4858	-0.435207	12.09969	-0.001971	12.1511	-5.276373
2.66	-0.0067	0.0077	2.8719	-0.1143	3.6380	-0.328247	10.44788	-0.001493	13.2349	-3.333745
2.67	-0.0090	0.0081	3.0217	-0.1028	3.7758	-0.310516	11.40921	-0.001085	14.2565	-4.499321
2.68	-0.0071	0.0085	3.1715	-0.0908	3.8987	-0.288043	12.36457	-0.000749	15.1995	-3.528008
2.69	-0.0075	0.0077	2.8719	-0.0785	4.0062	-0.225513	11.50523	-0.000484	16.0493	-3.722271
2.7	-0.0051	0.0077	2.8719	-0.0659	4.0979	-0.189304	11.76856	-0.000286	16.7924	-2.556694
2.71	-0.0075	0.0089	3.3213	-0.0530	4.1734	-0.176188	13.86099	-0.000149	17.4170	-3.722271
2.72	-0.0059	0.0081	3.0217	-0.0400	4.2324	-0.120777	12.78904	-0.000064	17.9133	-2.94522
2.73	-0.0071	0.0049	1.8233	-0.0267	4.2748	-0.048744	7.794002	-0.000019	18.2736	-3.528008
2.74	-0.0071	0.0073	2.7221	-0.0134	4.3002	-0.036459	11.70558	-0.000002	18.4920	-3.528008
2.75	-0.0055	0.0093	3.4711	0.0000	4.3087	-6.76E-14	14.95605	0.000000	18.5652	-2.750957
2.76	-0.0051	0.0093	3.4711	0.0134	4.3002	0.046491	14.92653	0.000002	18.4920	-2.556694
2.77	-0.0067	0.0125	4.6695	0.0267	4.2748	0.124839	19.9611	0.000019	18.2736	-3.333745
2.78	-0.0067	0.0089	3.3213	0.0400	4.2324	0.132753	14.0571	0.000064	17.9133	-3.333745

2.79	-0.0090	0.0085	3.1715	0.0530	4.1734	0.168241	13.2358	0.000149	17.4170	-4.499321
2.8	-0.0048	0.0073	2.7221	0.0659	4.0979	0.179429	11.15468	0.000286	16.7924	-2.362431
2.81	-0.0059	0.0073	2.7221	0.0785	4.0062	0.21375	10.9051	0.000484	16.0493	-2.94522
2.82	-0.0071	0.0081	3.0217	0.0908	3.8987	0.274438	11.78054	0.000749	15.1995	-3.528008
2.83	-0.0075	0.0073	2.7221	0.1028	3.7758	0.279728	10.27796	0.001085	14.2565	-3.722271
2.84	-0.0102	0.0073	2.7221	0.1143	3.6380	0.311125	9.902892	0.001493	13.2349	-5.08211
2.85	-0.0087	0.0073	2.7221	0.1254	3.4858	0.341295	9.48874	0.001971	12.1511	-4.305059
2.86	-0.0063	0.0093	3.4711	0.1360	3.3199	0.47196	11.52383	0.002514	11.0220	-3.139482
2.87	-0.0106	0.0065	2.4225	0.1460	3.1409	0.35373	7.608829	0.003113	9.8655	-5.276373
2.88	-0.0087	0.0081	3.0217	0.1555	2.9495	0.46986	8.912567	0.003760	8.6997	-4.305059
2.89	-0.0083	0.0089	3.3213	0.1644	2.7465	0.54588	9.121908	0.004440	7.5432	-4.110796
2.9	-0.0083	0.0081	3.0217	0.1726	2.5326	0.521455	7.652761	0.005139	6.4141	-4.110796
2.91	-0.0098	0.0089	3.3213	0.1801	2.3087	0.598175	7.667993	0.005842	5.3303	-4.887847
2.92	-0.0024	0.0073	2.7221	0.1869	2.0757	0.508823	5.650358	0.006531	4.3087	-1.196855
2.93	-0.0067	0.0077	2.8719	0.1930	1.8346	0.554297	5.268674	0.007190	3.3656	-3.333745
2.94	-0.0063	0.0073	2.7221	0.1983	1.5862	0.53987	4.317633	0.007801	2.5159	-3.139482
2.95	-0.0059	0.0057	2.1229	0.2029	1.3315	0.430665	2.82654	0.008349	1.7728	-2.94522
2.96	-0.0051	0.0077	2.8719	0.2066	1.0715	0.593354	3.077336	0.008819	1.1482	-2.556694
2.97	-0.0079	0.0065	2.4225	0.2095	0.8074	0.507584	1.955849	0.009199	0.6519	-3.916533
2.98	-0.0067	0.0077	2.8719	0.2116	0.5400	0.607769	1.550897	0.009478	0.2916	-3.333745
2.99	-0.0079	0.0081	3.0217	0.2129	0.2705	0.643282	0.817511	0.009648	0.0732	-3.916533
3	-0.0079	0.0073	2.7221	0.2133	0.0000	0.580645	1.47E-12	0.009706	0.0000	-3.916533
3.01	-0.0067	0.0077	2.8719	0.2129	-0.2705	0.611391	-0.776982	0.009648	0.0732	-3.333745
3.02	-0.0044	0.0089	3.3213	0.2116	-0.5400	0.702877	-1.793591	0.009478	0.2916	-2.168169
3.03	-0.0063	0.0089	3.3213	0.2095	-0.8074	0.695914	-2.681536	0.009199	0.6519	-3.139482
3.04	-0.0067	0.0097	3.6209	0.2066	-1.0715	0.748107	-3.879937	0.008819	1.1482	-3.333745
3.05	-0.0036	0.0093	3.4711	0.2029	-1.3315	0.704179	-4.621672	0.008349	1.7728	-1.779643
3.06	-0.0075	0.0073	2.7221	0.1983	-1.5862	0.53987	-4.317633	0.007801	2.5159	-3.722271
3.07	-0.0051	0.0073	2.7221	0.1930	-1.8346	0.525384	-4.993849	0.007190	3.3656	-2.556694
3.08	-0.0071	0.0077	2.8719	0.1869	-2.0757	0.536825	-5.961312	0.006531	4.3087	-3.528008
3.09	-0.0048	0.0081	3.0217	0.1801	-2.3087	0.544215	-6.97628	0.005842	5.3303	-2.362431
3.1	-0.0059	0.0077	2.8719	0.1726	-2.5326	0.495604	-7.273367	0.005139	6.4141	-2.94522
3.11	-0.0087	0.0097	3.6209	0.1644	-2.7465	0.595123	-9.944776	0.004440	7.5432	-4.305059
3.12	-0.0083	0.0089	3.3213	0.1555	-2.9495	0.516448	-9.796267	0.003760	8.6997	-4.110796
3.13	-0.0048	0.0077	2.8719	0.1460	-3.1409	0.419353	-9.020397	0.003113	9.8655	-2.362431
3.14	-0.0075	0.0073	2.7221	0.1360	-3.3199	0.370117	-9.03714	0.002514	11.0220	-3.722271
3.15	-0.0075	0.0089	3.3213	0.1254	-3.4858	0.416424	-11.5775	0.001971	12.1511	-3.722271
3.16	-0.0098	0.0057	2.1229	0.1143	-3.6380	0.242637	-7.722962	0.001493	13.2349	-4.887847
3.17	-0.0020	0.0089	3.3213	0.1028	-3.7758	0.341305	-12.54046	0.001085	14.2565	-1.002592
3.18	-0.0063	0.0081	3.0217	0.0908	-3.8987	0.274438	-11.78054	0.000749	15.1995	-3.139482
3.19	-0.0106	0.0085	3.1715	0.0785	-4.0062	0.24904	-12.70551	0.000484	16.0493	-5.276373
3.2	-0.0075	0.0085	3.1715	0.0659	-4.0979	0.209053	-12.9963	0.000286	16.7924	-3.722271
3.21	-0.0106	0.0101	3.7707	0.0530	-4.1734	0.200028	-15.73654	0.000149	17.4170	-5.276373
3.22	-0.0094	0.0093	3.4711	0.0400	-4.2324	0.13874	-14.69113	0.000064	17.9133	-4.693584
3.23	-0.0059	0.0081	3.0217	0.0267	-4.2748	0.080784	-12.91699	0.000019	18.2736	-2.94522
3.24	-0.0106	0.0053	1.9731	0.0134	-4.3002	0.026427	-8.484636	0.000002	18.4920	-5.276373
3.25	-0.0067	0.0069	2.5723	0.0000	-4.3087	8.72E-14	-11.08326	0.000000	18.5652	-3.333745
3.26	-0.0063	0.0097	3.6209	-0.0134	-4.3002	-0.048498	-15.57072	-0.000002	18.4920	-3.139482
3.27	-0.0063	0.0105	3.9205	-0.0267	-4.2748	-0.104814	-16.75923	-0.000019	18.2736	-3.139482
3.28	-0.0067	0.0081	3.0217	-0.0400	-4.2324	-0.120777	-12.78904	-0.000064	17.9133	-3.333745
3.29	-0.0055	0.0097	3.6209	-0.0530	-4.1734	-0.192081	-15.11136	-0.000149	17.4170	-2.750957
3.3	-0.0051	0.0077	2.8719	-0.0659	-4.0979	-0.189304	-11.76856	-0.000286	16.7924	-2.556694
3.31	-0.0036	0.0073	2.7221	-0.0785	-4.0062	-0.21375	-10.9051	-0.000484	16.0493	-1.779643
3.32	-0.0090	0.0077	2.8719	-0.0908	-3.8987	-0.260832	-11.1965	-0.000749	15.1995	-4.499321
3.33	-0.0059	0.0069	2.5723	-0.1028	-3.7758	-0.264334	-9.712339	-0.001085	14.2565	-2.94522
3.34	-0.0051	0.0101	3.7707	-0.1143	-3.6380	-0.43098	-13.71777	-0.001493	13.2349	-2.556694
3.35	-0.0075	0.0085	3.1715	-0.1254	-3.4858	-0.397642	-11.05531	-0.001971	12.1511	-3.722271
3.36	-0.0094	0.0105	3.9205	-0.1360	-3.3199	-0.533066	-13.01585	-0.002514	11.0220	-4.693584
3.37	-0.0075	0.0065	2.4225	-0.1460	-3.1409	-0.35373	-7.608829	-0.003113	9.8655	-3.722271
3.38	-0.0071	0.0069	2.5723	-0.1555	-2.9495	-0.399978	-7.587017	-0.003760	8.6997	-3.528008
3.39	-0.0051	0.0069	2.5723	-0.1644	-2.7465	-0.422774	-7.064739	-0.004440	7.5432	-2.556694
3.4	-0.0102	0.0101	3.7707	-0.1726	-2.5326	-0.650714	-9.54973	-0.005139	6.4141	-5.08211
3.41	-0.0051	0.0069	2.5723	-0.1801	-2.3087	-0.463275	-5.93871	-0.005842	5.3303	-2.556694
3.42	-0.0094	0.0089	3.3213	-0.1869	-2.0757	-0.620831	-6.894175	-0.006531	4.3087	-4.693584
3.43	-0.0110	0.0081	3.0217	-0.1930	-1.8346	-0.58321	-5.543499	-0.007190	3.3656	-5.470635
3.44	-0.0051	0.0073	2.7221	-0.1983	-1.5862	-0.53987	-4.317633	-0.007801	2.5159	-2.556694
3.45	-0.0059	0.0057	2.1229	-0.2029	-1.3315	-0.430665	-2.82654	-0.008349	1.7728	-2.94522
3.46	-0.0087	0.0089	3.3213	-0.2066	-1.0715	-0.686206	-3.558897	-0.008819	1.1482	-4.305059
3.47	-0.0079	0.0109	4.0703	-0.2095	-0.8074	-0.852857	-3.286275	-0.009199	0.6519	-3.916533
3.48	-0.0098	0.0065	2.4225	-0.2116	-0.5400	-0.512662	-1.308203	-0.009478	0.2916	-4.887847
3.49	-0.0079	0.0045	1.6735	-0.2129	-0.2705	-0.35626	-0.45275	-0.009648	0.0732	-3.916533

3.5	-0.0051	0.0093	3.4711	-0.2133	0.0000	-0.740418	-2.88E-12	-0.009706	0.0000	-2.556694
3.51	-0.0102	0.0041	1.5237	-0.2129	0.2705	-0.324368	0.412221	-0.009648	0.0732	-5.08211
3.52	-0.0051	0.0077	2.8719	-0.2116	0.5400	-0.607769	1.550897	-0.009478	0.2916	-2.556694
3.53	-0.0133	0.0089	3.3213	-0.2095	0.8074	-0.695914	2.681536	-0.009199	0.6519	-6.636212
3.54	-0.0087	0.0093	3.4711	-0.2066	1.0715	-0.717156	3.719417	-0.008819	1.1482	-4.305059
3.55	-0.0114	0.0101	3.7707	-0.2029	1.3315	-0.76496	5.02059	-0.008349	1.7728	-5.664898
3.56	-0.0063	0.0081	3.0217	-0.1983	1.5862	-0.599291	4.792855	-0.007801	2.5159	-3.139482
3.57	-0.0087	0.0081	3.0217	-0.1930	1.8346	-0.58321	5.543499	-0.007190	3.3656	-4.305059
3.58	-0.0114	0.0081	3.0217	-0.1869	2.0757	-0.564827	6.272267	-0.006531	4.3087	-5.664898
3.59	-0.0087	0.0069	2.5723	-0.1801	2.3087	-0.463275	5.93871	-0.005842	5.3303	-4.305059
3.6	-0.0075	0.0073	2.7221	-0.1726	2.5326	-0.469752	6.893973	-0.005139	6.4141	-3.722271
3.61	-0.0063	0.0065	2.4225	-0.1644	2.7465	-0.398152	6.653305	-0.004440	7.5432	-3.139482
3.62	-0.0087	0.0089	3.3213	-0.1555	2.9495	-0.516448	9.796267	-0.003760	8.6997	-4.305059
3.63	-0.0048	0.0057	2.1229	-0.1460	3.1409	-0.309982	6.667785	-0.003113	9.8655	-2.362431
3.64	-0.0083	0.0057	2.1229	-0.1360	3.3199	-0.288643	7.047788	-0.002514	11.0220	-4.110796
3.65	-0.0083	0.0073	2.7221	-0.1254	3.4858	-0.341295	9.48874	-0.001971	12.1511	-4.110796
3.66	-0.0075	0.0081	3.0217	-0.1143	3.6380	-0.345369	10.99286	-0.001493	13.2349	-3.722271
3.67	-0.0071	0.0097	3.6209	-0.1028	3.7758	-0.372093	13.67171	-0.001085	14.2565	-3.528008
3.68	-0.0083	0.0077	2.8719	-0.0908	3.8987	-0.260832	11.1965	-0.000749	15.1995	-4.110796
3.69	-0.0063	0.0069	2.5723	-0.0785	4.0062	-0.201987	10.30496	-0.000484	16.0493	-3.139482
3.7	-0.0048	0.0081	3.0217	-0.0659	4.0979	-0.199178	12.38243	-0.000286	16.7924	-2.362431
3.71	-0.0059	0.0077	2.8719	-0.0530	4.1734	-0.152347	11.98543	-0.000149	17.4170	-2.94522
3.72	-0.0075	0.0073	2.7221	-0.0400	4.2324	-0.108802	11.52098	-0.000064	17.9133	-3.722271
3.73	-0.0059	0.0069	2.5723	-0.0267	4.2748	-0.068769	10.99587	-0.000019	18.2736	-2.94522
3.74	-0.0079	0.0069	2.5723	-0.0134	4.3002	-0.034453	11.06139	-0.000002	18.4920	-3.916533
3.75	-0.0071	0.0069	2.5723	0.0000	4.3087	-1.24E-13	11.08326	0.000000	18.5652	-3.528008
3.76	-0.0059	0.0081	3.0217	0.0134	4.3002	0.040472	12.99396	0.000002	18.4920	-2.94522
3.77	-0.0036	0.0073	2.7221	0.0267	4.2748	0.072774	11.63624	0.000019	18.2736	-1.779643
3.78	-0.0048	0.0085	3.1715	0.0400	4.2324	0.126765	13.42307	0.000064	17.9133	-2.362431
3.79	-0.0079	0.0081	3.0217	0.0530	4.1734	0.160294	12.61062	0.000149	17.4170	-3.916533
3.8	-0.0067	0.0069	2.5723	0.0659	4.0979	0.169555	10.54081	0.000286	16.7924	-3.333745
3.81	-0.0083	0.0093	3.4711	0.0785	4.0062	0.272566	13.90578	0.000484	16.0493	-4.110796
3.82	-0.0110	0.0077	2.8719	0.0908	3.8987	0.260832	11.1965	0.000749	15.1995	-5.470635
3.83	-0.0098	0.0065	2.4225	0.1028	3.7758	0.24894	9.146715	0.001085	14.2565	-4.887847
3.84	-0.0090	0.0065	2.4225	0.1143	3.6380	0.276881	8.812927	0.001493	13.2349	-4.499321
3.85	-0.0098	0.0077	2.8719	0.1254	3.4858	0.360077	10.01093	0.001971	12.1511	-4.887847
3.86	-0.0083	0.0113	4.2201	0.1360	3.3199	0.573803	14.01052	0.002514	11.0220	-4.110796
3.87	-0.0040	0.0089	3.3213	0.1460	3.1409	0.484977	10.43197	0.003113	9.8655	-1.973906
3.88	-0.0098	0.0069	2.5723	0.1555	2.9495	0.399978	7.587017	0.003760	8.6997	-4.887847
3.89	-0.0067	0.0093	3.4711	0.1644	2.7465	0.570502	9.533342	0.004440	7.5432	-3.333745
3.9	-0.0130	0.0085	3.1715	0.1726	2.5326	0.547307	8.032155	0.005139	6.4141	-6.441949
3.91	-0.0079	0.0081	3.0217	0.1801	2.3087	0.544215	6.97628	0.005842	5.3303	-3.916533
3.92	-0.0040	0.0105	3.9205	0.1869	2.0757	0.732839	8.137993	0.006531	4.3087	-1.973906
3.93	-0.0051	0.0109	4.0703	0.1930	1.8346	0.785603	7.467274	0.007190	3.3656	-2.556694
3.94	-0.0106	0.0097	3.6209	0.1983	1.5862	0.718134	5.743298	0.007801	2.5159	-5.276373
3.95	-0.0063	0.0093	3.4711	0.2029	1.3315	0.704179	4.621672	0.008349	1.7728	-3.139482
3.96	-0.0098	0.0093	3.4711	0.2066	1.0715	0.717156	3.719417	0.008819	1.1482	-4.887847
3.97	-0.0098	0.0085	3.1715	0.2095	0.8074	0.664526	2.560588	0.009199	0.6519	-4.887847
3.98	-0.0102	0.0065	2.4225	0.2116	0.5400	0.512662	1.308203	0.009478	0.2916	-5.08211
3.99	-0.0118	0.0093	3.4711	0.2129	0.2705	0.738957	0.939098	0.009648	0.0732	-5.859161
4	-0.0087	0.0089	3.3213	0.2133	0.0000	0.708463	3.73E-12	0.009706	0.0000	-4.305059
4.01	-0.0071	0.0089	3.3213	0.2129	-0.2705	0.707065	-0.898569	0.009648	0.0732	-3.528008
4.02	-0.0110	0.0073	2.7221	0.2116	-0.5400	0.576067	-1.469999	0.009478	0.2916	-5.470635
4.03	-0.0079	0.0077	2.8719	0.2095	-0.8074	0.601749	-2.318692	0.009199	0.6519	-3.916533
4.04	-0.0048	0.0061	2.2727	0.2066	-1.0715	0.469552	-2.435255	0.008819	1.1482	-2.362431
4.05	-0.0036	0.0093	3.4711	0.2029	-1.3315	0.704179	-4.621672	0.008349	1.7728	-1.779643
4.06	-0.0024	0.0073	2.7221	0.1983	-1.5862	0.53987	-4.317633	0.007801	2.5159	-1.196855
4.07	-0.0110	0.0057	2.1229	0.1930	-1.8346	0.409731	-3.89455	0.007190	3.3656	-5.470635
4.08	-0.0130	0.0089	3.3213	0.1869	-2.0757	0.620831	-6.894175	0.006531	4.3087	-6.441949
4.09	-0.0044	0.0081	3.0217	0.1801	-2.3087	0.544215	-6.97628	0.005842	5.3303	-2.168169
4.1	-0.0059	0.0097	3.6209	0.1726	-2.5326	0.624862	-9.170337	0.005139	6.4141	-2.94522
4.11	-0.0075	0.0081	3.0217	0.1644	-2.7465	0.496638	-8.29904	0.004440	7.5432	-3.722271
4.12	-0.0059	0.0093	3.4711	0.1555	-2.9495	0.539741	-10.23812	0.003760	8.6997	-2.94522
4.13	-0.0051	0.0117	4.3699	0.1460	-3.1409	0.638097	-13.72562	0.003113	9.8655	-2.556694
4.14	-0.0083	0.0061	2.2727	0.1360	-3.3199	0.309012	-7.545126	0.002514	11.0220	-4.110796
4.15	-0.0051	0.0077	2.8719	0.1254	-3.4858	0.360077	-10.01093	0.001971	12.1511	-2.556694
4.16	-0.0071	0.0057	2.1229	0.1143	-3.6380	0.242637	-7.722962	0.001493	13.2349	-3.528008
4.17	-0.0102	0.0065	2.4225	0.1028	-3.7758	0.24894	-9.146715	0.001085	14.2565	-5.08211
4.18	-0.0048	0.0073	2.7221	0.0908	-3.8987	0.247227	-10.61247	0.000749	15.1995	-2.362431
4.19	-0.0087	0.0089	3.3213	0.0785	-4.0062	0.260803	-13.30564	0.000484	16.0493	-4.305059
4.2	-0.0079	0.0069	2.5723	0.0659	-4.0979	0.169555	-10.54081	0.000286	16.7924	-3.916533

4.21	-0.0075	0.0105	3.9205	0.0530	-4.1734	0.207975	-16.36173	0.000149	17.4170	-3.722271
4.22	-0.0063	0.0105	3.9205	0.0400	-4.2324	0.156703	-16.59322	0.000064	17.9133	-3.139482
4.23	-0.0067	0.0069	2.5723	0.0267	-4.2748	0.068769	-10.99587	0.000019	18.2736	-3.333745
4.24	-0.0051	0.0073	2.7221	0.0134	-4.3002	0.036459	-11.70558	0.000002	18.4920	-2.556694
4.25	-0.0044	0.0069	2.5723	0.0000	-4.3087	1.59E-13	-11.08326	0.000000	18.5652	-2.168169
4.26	-0.0040	0.0077	2.8719	-0.0134	-4.3002	-0.038465	-12.34977	-0.000002	18.4920	-1.973906
4.27	-0.0090	0.0077	2.8719	-0.0267	-4.2748	-0.076779	-12.27662	-0.000019	18.2736	-4.499321
4.28	-0.0071	0.0069	2.5723	-0.0400	-4.2324	-0.102814	-10.88695	-0.000064	17.9133	-3.528008
4.29	-0.0102	0.0073	2.7221	-0.0530	-4.1734	-0.144401	-11.36025	-0.000149	17.4170	-5.08211
4.3	-0.0079	0.0101	3.7707	-0.0659	-4.0979	-0.248551	-15.45179	-0.000286	16.7924	-3.916533
4.31	-0.0106	0.0073	2.7221	-0.0785	-4.0062	-0.21375	-10.9051	-0.000484	16.0493	-5.276373
4.32	-0.0032	0.0081	3.0217	-0.0908	-3.8987	-0.274438	-11.78054	-0.000749	15.1995	-1.58538
4.33	-0.0079	0.0085	3.1715	-0.1028	-3.7758	-0.325911	-11.97483	-0.001085	14.2565	-3.916533
4.34	-0.0075	0.0073	2.7221	-0.1143	-3.6380	-0.311125	-9.902892	-0.001493	13.2349	-3.722271
4.35	-0.0075	0.0077	2.8719	-0.1254	-3.4858	-0.360077	-10.01093	-0.001971	12.1511	-3.722271
4.36	-0.0063	0.0085	3.1715	-0.1360	-3.3199	-0.431223	-10.52915	-0.002514	11.0220	-3.139482
4.37	-0.0048	0.0069	2.5723	-0.1460	-3.1409	-0.375605	-8.079352	-0.003113	9.8655	-2.362431
4.38	-0.0114	0.0065	2.4225	-0.1555	-2.9495	-0.376685	-7.145166	-0.003760	8.6997	-5.664898
4.39	-0.0083	0.0089	3.3213	-0.1644	-2.7465	-0.54588	-9.121908	-0.004440	7.5432	-4.110796
4.4	-0.0028	0.0073	2.7221	-0.1726	-2.5326	-0.469752	-6.893973	-0.005139	6.4141	-1.391118
4.41	-0.0083	0.0073	2.7221	-0.1801	-2.3087	-0.490255	-6.284567	-0.005842	5.3303	-4.110796
4.42	-0.0087	0.0069	2.5723	-0.1869	-2.0757	-0.480822	-5.339403	-0.006531	4.3087	-4.305059
4.43	-0.0063	0.0077	2.8719	-0.1930	-1.8346	-0.554297	-5.268674	-0.007190	3.3656	-3.139482
4.44	-0.0055	0.0065	2.4225	-0.1983	-1.5862	-0.480449	-3.842411	-0.007801	2.5159	-2.750957
4.45	-0.0083	0.0073	2.7221	-0.2029	-1.3315	-0.552227	-3.624376	-0.008349	1.7728	-4.110796
4.46	-0.0071	0.0081	3.0217	-0.2066	-1.0715	-0.624304	-3.237856	-0.008819	1.1482	-3.528008
4.47	-0.0063	0.0097	3.6209	-0.2095	-0.8074	-0.758691	-2.923431	-0.009199	0.6519	-3.139482
4.48	-0.0071	0.0065	2.4225	-0.2116	-0.5400	-0.512662	-1.308203	-0.009478	0.2916	-3.528008
4.49	-0.0067	0.0061	2.2727	-0.2129	-0.2705	-0.483825	-0.614866	-0.009648	0.0732	-3.333745
4.5	-0.0090	0.0073	2.7221	-0.2133	0.0000	-0.580645	-3.8E-12	-0.009706	0.0000	-4.499321
4.51	-0.0071	0.0057	2.1229	-0.2129	0.2705	-0.451934	0.574337	-0.009648	0.0732	-3.528008
4.52	-0.0071	0.0097	3.6209	-0.2116	0.5400	-0.766282	1.955388	-0.009478	0.2916	-3.528008
4.53	-0.0016	0.0105	3.9205	-0.2095	0.8074	-0.821468	3.165327	-0.009199	0.6519	-0.808329
4.54	-0.0063	0.0069	2.5723	-0.2066	1.0715	-0.531453	2.756296	-0.008819	1.1482	-3.139482
4.55	-0.0059	0.0093	3.4711	-0.2029	1.3315	-0.704179	4.621672	-0.008349	1.7728	-2.94522
4.56	-0.0063	0.0105	3.9205	-0.1983	1.5862	-0.777555	6.21852	-0.007801	2.5159	-3.139482
4.57	-0.0059	0.0077	2.8719	-0.1930	1.8346	-0.554297	5.268674	-0.007190	3.3656	-2.94522
4.58	-0.0071	0.0089	3.3213	-0.1869	2.0757	-0.620831	6.894175	-0.006531	4.3087	-3.528008
4.59	-0.0055	0.0077	2.8719	-0.1801	2.3087	-0.517235	6.630423	-0.005842	5.3303	-2.750957
4.6	-0.0059	0.0077	2.8719	-0.1726	2.5326	-0.495604	7.273367	-0.005139	6.4141	-2.94522
4.61	-0.0110	0.0077	2.8719	-0.1644	2.7465	-0.472016	7.887606	-0.004440	7.5432	-5.470635
4.62	-0.0071	0.0077	2.8719	-0.1555	2.9495	-0.446566	8.470717	-0.003760	8.6997	-3.528008
4.63	-0.0094	0.0093	3.4711	-0.1460	3.1409	-0.506851	10.90249	-0.003113	9.8655	-4.693584
4.64	-0.0036	0.0061	2.2727	-0.1360	3.3199	-0.309012	7.545126	-0.002514	11.0220	-1.779643
4.65	-0.0055	0.0049	1.8233	-0.1254	3.4858	-0.228601	6.355595	-0.001971	12.1511	-2.750957
4.66	-0.0083	0.0089	3.3213	-0.1143	3.6380	-0.379614	12.08282	-0.001493	13.2349	-4.110796
4.67	-0.0075	0.0101	3.7707	-0.1028	3.7758	-0.387487	14.23733	-0.001085	14.2565	-3.722271
4.68	-0.0087	0.0101	3.7707	-0.0908	3.8987	-0.342466	14.7007	-0.000749	15.1995	-4.305059
4.69	-0.0051	0.0069	2.5723	-0.0785	4.0062	-0.201987	10.30496	-0.000484	16.0493	-2.556694
4.7	-0.0051	0.0077	2.8719	-0.0659	4.0979	-0.189304	11.76856	-0.000286	16.7924	-2.556694
4.71	-0.0071	0.0093	3.4711	-0.0530	4.1734	-0.184134	14.48617	-0.000149	17.4170	-3.528008
4.72	-0.0063	0.0081	3.0217	-0.0400	4.2324	-0.120777	12.78904	-0.000064	17.9133	-3.139482
4.73	-0.0079	0.0057	2.1229	-0.0267	4.2748	-0.056754	9.074749	-0.000019	18.2736	-3.916533
4.74	-0.0059	0.0077	2.8719	-0.0134	4.3002	-0.038465	12.34977	-0.000002	18.4920	-2.94522
4.75	-0.0137	0.0077	2.8719	0.0000	4.3087	-2.19E-13	12.37419	0.000000	18.5652	-6.830475
4.76	-0.0071	0.0065	2.4225	0.0134	4.3002	0.032446	10.4172	0.000002	18.4920	-3.528008
4.77	-0.0090	0.0061	2.2727	0.0267	4.2748	0.060759	9.715122	0.000019	18.2736	-4.499321
4.78	-0.0087	0.0065	2.4225	0.0400	4.2324	0.096827	10.25292	0.000064	17.9133	-4.305059
4.79	-0.0075	0.0077	2.8719	0.0530	4.1734	0.152347	11.98543	0.000149	17.4170	-3.722271
4.8	-0.0083	0.0105	3.9205	0.0659	4.0979	0.258425	16.06566	0.000286	16.7924	-4.110796
4.81	-0.0071	0.0105	3.9205	0.0785	4.0062	0.307856	15.70619	0.000484	16.0493	-3.528008
4.82	-0.0075	0.0089	3.3213	0.0908	3.8987	0.301649	12.9486	0.000749	15.1995	-3.722271
4.83	-0.0048	0.0077	2.8719	0.1028	3.7758	0.295122	10.84359	0.001085	14.2565	-2.362431
4.84	-0.0094	0.0085	3.1715	0.1143	3.6380	0.362492	11.53784	0.001493	13.2349	-4.693584
4.85	-0.0075	0.0081	3.0217	0.1254	3.4858	0.37886	10.53312	0.001971	12.1511	-3.722271
4.86	-0.0114	0.0101	3.7707	0.1360	3.3199	0.512697	12.51851	0.002514	11.0220	-5.664898
4.87	-0.0040	0.0045	1.6735	0.1460	3.1409	0.244359	5.256217	0.003113	9.8655	-1.973906
4.88	-0.0048	0.0089	3.3213	0.1555	2.9495	0.516448	9.796267	0.003760	8.6997	-2.362431
4.89	-0.0063	0.0073	2.7221	0.1644	2.7465	0.447395	7.476173	0.004440	7.5432	-3.139482
4.9	-0.0087	0.0089	3.3213	0.1726	2.5326	0.573159	8.411549	0.005139	6.4141	-4.305059
4.91	-0.0067	0.0093	3.4711	0.1801	2.3087	0.625155	8.01385	0.005842	5.3303	-3.333745

4.92	-0.0063	0.0073	2.7221	0.1869	2.0757	0.508823	5.650358	0.006531	4.3087	-3.139482
4.93	-0.0055	0.0093	3.4711	0.1930	1.8346	0.66995	6.367974	0.007190	3.3656	-2.750957
4.94	-0.0071	0.0077	2.8719	0.1983	1.5862	0.569581	4.555244	0.007801	2.5159	-3.528008
4.95	-0.0079	0.0033	1.2240	0.2029	1.3315	0.248321	1.629785	0.008349	1.7728	-3.916533
4.96	-0.0075	0.0101	3.7707	0.2066	1.0715	0.779057	4.040458	0.008819	1.1482	-3.722271
4.97	-0.0040	0.0077	2.8719	0.2095	0.8074	0.601749	2.318692	0.009199	0.6519	-1.973906
4.98	-0.0075	0.0101	3.7707	0.2116	0.5400	0.797984	2.036286	0.009478	0.2916	-3.722271
4.99	-0.0079	0.0093	3.4711	0.2129	0.2705	0.738957	0.939098	0.009648	0.0732	-3.916533
5	-0.0055	0.0073	2.7221	0.2133	0.0000	0.580645	4.6E-12	0.009706	0.0000	-2.750957
5.01	-0.0102	0.0113	4.2201	0.2129	-0.2705	0.898414	-1.141743	0.009648	0.0732	-5.08211
5.02	-0.0090	0.0073	2.7221	0.2116	-0.5400	0.576067	-1.469999	0.009478	0.2916	-4.499321
5.03	-0.0090	0.0057	2.1229	0.2095	-0.8074	0.444807	-1.713953	0.009199	0.6519	-4.499321
5.04	-0.0059	0.0085	3.1715	0.2066	-1.0715	0.655255	-3.398377	0.008819	1.1482	-2.94522
5.05	-0.0048	0.0089	3.3213	0.2029	-1.3315	0.673789	-4.422213	0.008349	1.7728	-2.362431
5.06	-0.0098	0.0117	4.3699	0.1983	-1.5862	0.866686	-6.931353	0.007801	2.5159	-4.887847
5.07	-0.0083	0.0089	3.3213	0.1930	-1.8346	0.641037	-6.093149	0.007190	3.3656	-4.110796
5.08	-0.0090	0.0069	2.5723	0.1869	-2.0757	0.480822	-5.339403	0.006531	4.3087	-4.499321
5.09	-0.0055	0.0081	3.0217	0.1801	-2.3087	0.544215	-6.97628	0.005842	5.3303	-2.750957
5.1	-0.0106	0.0089	3.3213	0.1726	-2.5326	0.573159	-8.411549	0.005139	6.4141	-5.276373
5.11	-0.0083	0.0085	3.1715	0.1644	-2.7465	0.521259	-8.710474	0.004440	7.5432	-4.110796
5.12	-0.0071	0.0089	3.3213	0.1555	-2.9495	0.516448	-9.796267	0.003760	8.6997	-3.528008
5.13	-0.0044	0.0097	3.6209	0.1460	-3.1409	0.528725	-11.37301	0.003113	9.8655	-2.168169
5.14	-0.0071	0.0089	3.3213	0.1360	-3.3199	0.451592	-11.02649	0.002514	11.0220	-3.528008
5.15	-0.0106	0.0073	2.7221	0.1254	-3.4858	0.341295	-9.48874	0.001971	12.1511	-5.276373
5.16	-0.0090	0.0073	2.7221	0.1143	-3.6380	0.311125	-9.902892	0.001493	13.2349	-4.499321
5.17	-0.0094	0.0093	3.4711	0.1028	-3.7758	0.356699	-13.10608	0.001085	14.2565	-4.693584
5.18	-0.0094	0.0085	3.1715	0.0908	-3.8987	0.288043	-12.36457	0.000749	15.1995	-4.693584
5.19	-0.0106	0.0037	1.3739	0.0785	-4.0062	0.107881	-5.503866	0.000484	16.0493	-5.276373
5.2	-0.0087	0.0089	3.3213	0.0659	-4.0979	0.218927	-13.61017	0.000286	16.7924	-4.305059
5.21	-0.0075	0.0069	2.5723	0.0530	-4.1734	0.136454	-10.73506	0.000149	17.4170	-3.722271
5.22	-0.0087	0.0077	2.8719	0.0400	-4.2324	0.11479	-12.15501	0.000064	17.9133	-4.305059
5.23	-0.0110	0.0093	3.4711	0.0267	-4.2748	0.092799	-14.83811	0.000019	18.2736	-5.470635
5.24	-0.0090	0.0061	2.2727	0.0134	-4.3002	0.03044	-9.773015	0.000002	18.4920	-4.499321
5.25	-0.0090	0.0093	3.4711	0.0000	-4.3087	3.15E-13	-14.95605	0.000000	18.5652	-4.499321
5.26	-0.0067	0.0089	3.3213	-0.0134	-4.3002	-0.044485	-14.28234	-0.000002	18.4920	-3.333745
5.27	-0.0106	0.0065	2.4225	-0.0267	-4.2748	-0.064764	-10.3555	-0.000019	18.2736	-5.276373
5.28	-0.0094	0.0089	3.3213	-0.0400	-4.2324	-0.132753	-14.0571	-0.000064	17.9133	-4.693584
5.29	-0.0098	0.0093	3.4711	-0.0530	-4.1734	-0.184134	-14.48617	-0.000149	17.4170	-4.887847
5.3	-0.0075	0.0069	2.5723	-0.0659	-4.0979	-0.169555	-10.54081	-0.000286	16.7924	-3.722271
5.31	-0.0071	0.0081	3.0217	-0.0785	-4.0062	-0.237276	-12.10537	-0.000484	16.0493	-3.528008
5.32	-0.0079	0.0077	2.8719	-0.0908	-3.8987	-0.260832	-11.1965	-0.000749	15.1995	-3.916533
5.33	-0.0048	0.0089	3.3213	-0.1028	-3.7758	-0.341305	-12.54046	-0.001085	14.2565	-2.362431
5.34	-0.0090	0.0073	2.7221	-0.1143	-3.6380	-0.311125	-9.902892	-0.001493	13.2349	-4.499321
5.35	-0.0059	0.0101	3.7707	-0.1254	-3.4858	-0.472771	-13.14408	-0.001971	12.1511	-2.94522
5.36	-0.0122	0.0057	2.1229	-0.1360	-3.3199	-0.288643	-7.047788	-0.002514	11.0220	-6.053424
5.37	-0.0071	0.0093	3.4711	-0.1460	-3.1409	-0.506851	-10.90249	-0.003113	9.8655	-3.528008
5.38	-0.0102	0.0073	2.7221	-0.1555	-2.9495	-0.423272	-8.028867	-0.003760	8.6997	-5.08211
5.39	-0.0059	0.0077	2.8719	-0.1644	-2.7465	-0.472016	-7.887606	-0.004440	7.5432	-2.94522
5.4	-0.0110	0.0085	3.1715	-0.1726	-2.5326	-0.547307	-8.032155	-0.005139	6.4141	-5.470635
5.41	-0.0063	0.0065	2.4225	-0.1801	-2.3087	-0.436295	-5.592853	-0.005842	5.3303	-3.139482
5.42	-0.0137	0.0109	4.0703	-0.1869	-2.0757	-0.760841	-8.448947	-0.006531	4.3087	-6.830475
5.43	-0.0071	0.0081	3.0217	-0.1930	-1.8346	-0.58321	-5.543499	-0.007190	3.3656	-3.528008
5.44	-0.0055	0.0093	3.4711	-0.1983	-1.5862	-0.688423	-5.505687	-0.007801	2.5159	-2.750957
5.45	-0.0094	0.0081	3.0217	-0.2029	-1.3315	-0.613008	-4.023295	-0.008349	1.7728	-4.693584
5.46	-0.0048	0.0097	3.6209	-0.2066	-1.0715	-0.748107	-3.879937	-0.008819	1.1482	-2.362431
5.47	-0.0071	0.0101	3.7707	-0.2095	-0.8074	-0.79008	-3.044379	-0.009199	0.6519	-3.528008
5.48	-0.0067	0.0093	3.4711	-0.2116	-0.5400	-0.734579	-1.874489	-0.009478	0.2916	-3.333745
5.49	-0.0090	0.0109	4.0703	-0.2129	-0.2705	-0.866522	-1.101214	-0.009648	0.0732	-4.499321
5.5	-0.0036	0.0073	2.7221	-0.2133	0.0000	-0.580645	-5.39E-12	-0.009706	0.0000	-1.779643
5.51	-0.0087	0.0085	3.1715	-0.2129	0.2705	-0.675174	0.85804	-0.009648	0.0732	-4.305059
5.52	-0.0063	0.0073	2.7221	-0.2116	0.5400	-0.576067	1.469999	-0.009478	0.2916	-3.139482
5.53	-0.0083	0.0077	2.8719	-0.2095	0.8074	-0.601749	2.318692	-0.009199	0.6519	-4.110796
5.54	-0.0067	0.0081	3.0217	-0.2066	1.0715	-0.624304	3.237856	-0.008819	1.1482	-3.333745
5.55	-0.0059	0.0073	2.7221	-0.2029	1.3315	-0.552227	3.624376	-0.008349	1.7728	-2.94522
5.56	-0.0067	0.0105	3.9205	-0.1983	1.5862	-0.777555	6.21852	-0.007801	2.5159	-3.333745
5.57	-0.0055	0.0073	2.7221	-0.1930	1.8346	-0.525384	4.993849	-0.007190	3.3656	-2.750957
5.58	-0.0106	0.0065	2.4225	-0.1869	2.0757	-0.45282	5.028449	-0.006531	4.3087	-5.276373
5.59	-0.0048	0.0089	3.3213	-0.1801	2.3087	-0.598175	7.667993	-0.005842	5.3303	-2.362431
5.6	-0.0067	0.0097	3.6209	-0.1726	2.5326	-0.624862	9.170337	-0.005139	6.4141	-3.333745
5.61	-0.0075	0.0085	3.1715	-0.1644	2.7465	-0.521259	8.710474	-0.004440	7.5432	-3.722271
5.62	-0.0059	0.0073	2.7221	-0.1555	2.9495	-0.423272	8.028867	-0.003760	8.6997	-2.94522

5.63	-0.0032	0.0061	2.2727	-0.1460	3.1409	-0.331856	7.138307	-0.003113	9.8655	-1.58538
5.64	-0.0075	0.0065	2.4225	-0.1360	3.3199	-0.32938	8.042464	-0.002514	11.0220	-3.722271
5.65	-0.0087	0.0089	3.3213	-0.1254	3.4858	-0.416424	11.5775	-0.001971	12.1511	-4.305059
5.66	-0.0063	0.0077	2.8719	-0.1143	3.6380	-0.328247	10.44788	-0.001493	13.2349	-3.139482
5.67	-0.0067	0.0073	2.7221	-0.1028	3.7758	-0.279728	10.27796	-0.001085	14.2565	-3.333745
5.68	-0.0079	0.0081	3.0217	-0.0908	3.8987	-0.274438	11.78054	-0.000749	15.1995	-3.916533
5.69	-0.0059	0.0065	2.4225	-0.0785	4.0062	-0.190223	9.704822	-0.000484	16.0493	-2.94522
5.7	-0.0032	0.0097	3.6209	-0.0659	4.0979	-0.238676	14.83792	-0.000286	16.7924	-1.58538
5.71	-0.0063	0.0081	3.0217	-0.0530	4.1734	-0.160294	12.61062	-0.000149	17.4170	-3.139482
5.72	-0.0087	0.0077	2.8719	-0.0400	4.2324	-0.11479	12.15501	-0.000064	17.9133	-4.305059
5.73	-0.0071	0.0077	2.8719	-0.0267	4.2748	-0.076779	12.27662	-0.000019	18.2736	-3.528008
5.74	-0.0098	0.0081	3.0217	-0.0134	4.3002	-0.040472	12.99396	-0.000002	18.4920	-4.887847
5.75	-0.0028	0.0073	2.7221	0.0000	4.3087	-2.87E-13	11.72873	0.000000	18.5652	-1.391118
5.76	-0.0102	0.0097	3.6209	0.0134	4.3002	0.048498	15.57072	0.000002	18.4920	-5.08211
5.77	-0.0059	0.0065	2.4225	0.0267	4.2748	0.064764	10.3555	0.000019	18.2736	-2.94522
5.78	-0.0067	0.0065	2.4225	0.0400	4.2324	0.096827	10.25292	0.000064	17.9133	-3.333745
5.79	-0.0079	0.0073	2.7221	0.0530	4.1734	0.144401	11.36025	0.000149	17.4170	-3.916533
5.8	-0.0079	0.0081	3.0217	0.0659	4.0979	0.199178	12.38243	0.000286	16.7924	-3.916533
5.81	-0.0067	0.0069	2.5723	0.0785	4.0062	0.201987	10.30496	0.000484	16.0493	-3.333745
5.82	-0.0055	0.0089	3.3213	0.0908	3.8987	0.301649	12.9486	0.000749	15.1995	-2.750957
5.83	-0.0087	0.0065	2.4225	0.1028	3.7758	0.24894	9.146715	0.001085	14.2565	-4.305059
5.84	-0.0067	0.0061	2.2727	0.1143	3.6380	0.259759	8.267944	0.001493	13.2349	-3.333745
5.85	-0.0102	0.0097	3.6209	0.1254	3.4858	0.453989	12.62189	0.001971	12.1511	-5.08211
5.86	-0.0059	0.0089	3.3213	0.1360	3.3199	0.451592	11.02649	0.002514	11.0220	-2.94522
5.87	-0.0048	0.0049	1.8233	0.1460	3.1409	0.266233	5.72674	0.003113	9.8655	-2.362431
5.88	-0.0048	0.0085	3.1715	0.1555	2.9495	0.493154	9.354417	0.003760	8.6997	-2.362431
5.89	-0.0071	0.0073	2.7221	0.1644	2.7465	0.447395	7.476173	0.004440	7.5432	-3.528008
5.9	-0.0001	0.0061	2.2727	0.1726	2.5326	0.392197	5.755792	0.005139	6.4141	-0.031278
5.91	-0.0079	0.0073	2.7221	0.1801	2.3087	0.490255	6.284567	0.005842	5.3303	-3.916533
5.92	-0.0063	0.0069	2.5723	0.1869	2.0757	0.480822	5.339403	0.006531	4.3087	-3.139482
5.93	-0.0079	0.0077	2.8719	0.1930	1.8346	0.554297	5.268674	0.007190	3.3656	-3.916533
5.94	-0.0071	0.0069	2.5723	0.1983	1.5862	0.51016	4.080022	0.007801	2.5159	-3.528008
5.95	-0.0083	0.0081	3.0217	0.2029	1.3315	0.613008	4.023295	0.008349	1.7728	-4.110796
5.96	-0.0083	0.0069	2.5723	0.2066	1.0715	0.531453	2.756296	0.008819	1.1482	-4.110796
5.97	-0.0040	0.0057	2.1229	0.2095	0.8074	0.444807	1.713953	0.009199	0.6519	-1.973906
5.98	-0.0094	0.0077	2.8719	0.2116	0.5400	0.607769	1.550897	0.009478	0.2916	-4.693584
5.99	-0.0106	0.0113	4.2201	0.2129	0.2705	0.898414	1.141743	0.009648	0.0732	-5.276373
6	-0.0051	0.0073	2.7221	0.2133	0.0000	0.580645	6.18E-12	0.009706	0.0000	-2.556694
6.01	-0.0040	0.0105	3.9205	0.2129	-0.2705	0.834631	-1.060685	0.009648	0.0732	-1.973906
6.02	-0.0075	0.0073	2.7221	0.2116	-0.5400	0.576067	-1.469999	0.009478	0.2916	-3.722271
6.03	-0.0055	0.0101	3.7707	0.2095	-0.8074	0.79008	-3.044379	0.009199	0.6519	-2.750957
6.04	-0.0087	0.0097	3.6209	0.2066	-1.0715	0.748107	-3.879937	0.008819	1.1482	-4.305059
6.05	-0.0048	0.0081	3.0217	0.2029	-1.3315	0.613008	-4.023295	0.008349	1.7728	-2.362431
6.06	-0.0071	0.0093	3.4711	0.1983	-1.5862	0.688423	-5.505687	0.007801	2.5159	-3.528008
6.07	-0.0114	0.0081	3.0217	0.1930	-1.8346	0.58321	-5.543499	0.007190	3.3656	-5.664898
6.08	-0.0083	0.0077	2.8719	0.1869	-2.0757	0.536825	-5.961312	0.006531	4.3087	-4.110796
6.09	-0.0071	0.0089	3.3213	0.1801	-2.3087	0.598175	-7.667993	0.005842	5.3303	-3.528008
6.1	-0.0051	0.0073	2.7221	0.1726	-2.5326	0.469752	-6.893973	0.005139	6.4141	-2.556694
6.11	-0.0036	0.0073	2.7221	0.1644	-2.7465	0.447395	-7.476173	0.004440	7.5432	-1.779643
6.12	-0.0079	0.0073	2.7221	0.1555	-2.9495	0.423272	-8.028867	0.003760	8.6997	-3.916533
6.13	-0.0071	0.0057	2.1229	0.1460	-3.1409	0.309982	-6.667785	0.003113	9.8655	-3.528008
6.14	-0.0075	0.0069	2.5723	0.1360	-3.3199	0.349749	-8.539802	0.002514	11.0220	-3.722271
6.15	-0.0079	0.0093	3.4711	0.1254	-3.4858	0.435207	-12.09969	0.001971	12.1511	-3.916533
6.16	-0.0075	0.0089	3.3213	0.1143	-3.6380	0.379614	-12.08282	0.001493	13.2349	-3.722271
6.17	-0.0055	0.0117	4.3699	0.1028	-3.7758	0.449064	-16.49983	0.001085	14.2565	-2.750957
6.18	-0.0044	0.0069	2.5723	0.0908	-3.8987	0.233621	-10.02844	0.000749	15.1995	-2.168169
6.19	-0.0090	0.0097	3.6209	0.0785	-4.0062	0.284329	-14.50592	0.000484	16.0493	-4.499321
6.2	-0.0083	0.0057	2.1229	0.0659	-4.0979	0.139931	-8.699195	0.000286	16.7924	-4.110796
6.21	-0.0118	0.0101	3.7707	0.0530	-4.1734	0.200028	-15.73654	0.000149	17.4170	-5.859161
6.22	-0.0083	0.0085	3.1715	0.0400	-4.2324	0.126765	-13.42307	0.000064	17.9133	-4.110796
6.23	-0.0083	0.0077	2.8719	0.0267	-4.2748	0.076779	-12.27662	0.000019	18.2736	-4.110796
6.24	-0.0079	0.0057	2.1229	0.0134	-4.3002	0.028433	-9.128826	0.000002	18.4920	-3.916533
6.25	-0.0087	0.0069	2.5723	0.0000	-4.3087	3.08E-13	-11.08326	0.000000	18.5652	-4.305059
6.26	-0.0075	0.0065	2.4225	-0.0134	-4.3002	-0.032446	-10.4172	-0.000002	18.4920	-3.722271
6.27	-0.0090	0.0093	3.4711	-0.0267	-4.2748	-0.092799	-14.83811	-0.000019	18.2736	-4.499321
6.28	-0.0094	0.0101	3.7707	-0.0400	-4.2324	-0.150716	-15.95919	-0.000064	17.9133	-4.693584
6.29	-0.0067	0.0081	3.0217	-0.0530	-4.1734	-0.160294	-12.61062	-0.000149	17.4170	-3.333745
6.3	-0.0059	0.0105	3.9205	-0.0659	-4.0979	-0.258425	-16.06566	-0.000286	16.7924	-2.94522
6.31	-0.0055	0.0073	2.7221	-0.0785	-4.0062	-0.21375	-10.9051	-0.000484	16.0493	-2.750957
6.32	-0.0055	0.0101	3.7707	-0.0908	-3.8987	-0.342466	-14.7007	-0.000749	15.1995	-2.750957
6.33	-0.0063	0.0081	3.0217	-0.1028	-3.7758	-0.310516	-11.40921	-0.001085	14.2565	-3.139482

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6.34	-0.0071	0.0073	2.7221	-0.1143	-3.6380	-0.311125	-9.902892	-0.001493	13.2349	-3.528008
6.35	-0.0087	0.0093	3.4711	-0.1254	-3.4858	-0.435207	-12.09969	-0.001971	12.1511	-4.305059
6.36	-0.0079	0.0069	2.5723	-0.1360	-3.3199	-0.349749	-8.539802	-0.002514	11.0220	-3.916533
6.37	-0.0071	0.0089	3.3213	-0.1460	-3.1409	-0.484977	-10.43197	-0.003113	9.8655	-3.528008
6.38	-0.0071	0.0081	3.0217	-0.1555	-2.9495	-0.46986	-8.912567	-0.003760	8.6997	-3.528008
6.39	-0.0098	0.0097	3.6209	-0.1644	-2.7465	-0.595123	-9.944776	-0.004440	7.5432	-4.887847
6.4	-0.0083	0.0085	3.1715	-0.1726	-2.5326	-0.547307	-8.032155	-0.005139	6.4141	-4.110796
6.41	-0.0094	0.0081	3.0217	-0.1801	-2.3087	-0.544215	-6.97628	-0.005842	5.3303	-4.693584
6.42	-0.0063	0.0085	3.1715	-0.1869	-2.0757	-0.592829	-6.583221	-0.006531	4.3087	-3.139482
6.43	-0.0083	0.0085	3.1715	-0.1930	-1.8346	-0.612123	-5.818324	-0.007190	3.3656	-4.110796
6.44	-0.0090	0.0069	2.5723	-0.1983	-1.5862	-0.51016	-4.080022	-0.007801	2.5159	-4.499321
6.45	-0.0048	0.0093	3.4711	-0.2029	-1.3315	-0.704179	-4.621672	-0.008349	1.7728	-2.362431
6.46	-0.0090	0.0097	3.6209	-0.2066	-1.0715	-0.748107	-3.879937	-0.008819	1.1482	-4.499321
6.47	-0.0067	0.0081	3.0217	-0.2095	-0.8074	-0.633138	-2.43964	-0.009199	0.6519	-3.333745
6.48	-0.0118	0.0109	4.0703	-0.2116	-0.5400	-0.861389	-2.198082	-0.009478	0.2916	-5.859161
6.49	-0.0048	0.0077	2.8719	-0.2129	-0.2705	-0.611391	-0.776982	-0.009648	0.0732	-2.362431
6.5	-0.0106	0.0069	2.5723	-0.2133	0.0000	-0.548691	-6.59E-12	-0.009706	0.0000	-5.276373
6.51	-0.0051	0.0081	3.0217	-0.2129	0.2705	-0.643282	0.817511	-0.009648	0.0732	-2.556694
6.52	-0.0075	0.0057	2.1229	-0.2116	0.5400	-0.449257	1.146407	-0.009478	0.2916	-3.722271
6.53	-0.0071	0.0085	3.1715	-0.2095	0.8074	-0.664526	2.560588	-0.009199	0.6519	-3.528008
6.54	-0.0094	0.0073	2.7221	-0.2066	1.0715	-0.562403	2.916816	-0.008819	1.1482	-4.693584
6.55	-0.0051	0.0061	2.2727	-0.2029	1.3315	-0.461055	3.025999	-0.008349	1.7728	-2.556694
6.56	-0.0102	0.0081	3.0217	-0.1983	1.5862	-0.599291	4.792855	-0.007801	2.5159	-5.08211
6.57	-0.0071	0.0077	2.8719	-0.1930	1.8346	-0.554297	5.268674	-0.007190	3.3656	-3.528008
6.58	-0.0071	0.0085	3.1715	-0.1869	2.0757	-0.592829	6.583221	-0.006531	4.3087	-3.528008
6.59	-0.0087	0.0077	2.8719	-0.1801	2.3087	-0.517235	6.630423	-0.005842	5.3303	-4.305059
6.6	-0.0079	0.0077	2.8719	-0.1726	2.5326	-0.495604	7.273367	-0.005139	6.4141	-3.916533
6.61	-0.0067	0.0073	2.7221	-0.1644	2.7465	-0.447395	7.476173	-0.004440	7.5432	-3.333745
6.62	-0.0083	0.0065	2.4225	-0.1555	2.9495	-0.376685	7.145166	-0.003760	8.6997	-4.110796
6.63	-0.0040	0.0065	2.4225	-0.1460	3.1409	-0.35373	7.608829	-0.003113	9.8655	-1.973906
6.64	-0.0090	0.0081	3.0217	-0.1360	3.3199	-0.410854	10.03182	-0.002514	11.0220	-4.499321
6.65	-0.0048	0.0093	3.4711	-0.1254	3.4858	-0.435207	12.09969	-0.001971	12.1511	-2.362431
6.66	-0.0051	0.0089	3.3213	-0.1143	3.6380	-0.379614	12.08282	-0.001493	13.2349	-2.556694
6.67	-0.0090	0.0053	1.9731	-0.1028	3.7758	-0.202757	7.449844	-0.001085	14.2565	-4.499321
6.68	-0.0075	0.0089	3.3213	-0.0908	3.8987	-0.301649	12.9486	-0.000749	15.1995	-3.722271
6.69	-0.0067	0.0081	3.0217	-0.0785	4.0062	-0.237276	12.10537	-0.000484	16.0493	-3.333745
6.7	-0.0051	0.0077	2.8719	-0.0659	4.0979	-0.189304	11.76856	-0.000286	16.7924	-2.556694
6.71	-0.0083	0.0081	3.0217	-0.0530	4.1734	-0.160294	12.61062	-0.000149	17.4170	-4.110796
6.72	-0.0071	0.0073	2.7221	-0.0400	4.2324	-0.108802	11.52098	-0.000064	17.9133	-3.528008
6.73	-0.0067	0.0093	3.4711	-0.0267	4.2748	-0.092799	14.83811	-0.000019	18.2736	-3.333745
6.74	-0.0063	0.0077	2.8719	-0.0134	4.3002	-0.038465	12.34977	-0.000002	18.4920	-3.139482
6.75	-0.0083	0.0081	3.0217	0.0000	4.3087	-4.05E-13	13.01965	0.000000	18.5652	-4.110796
6.76	-0.0075	0.0093	3.4711	0.0134	4.3002	0.046491	14.92653	0.000002	18.4920	-3.722271
6.77	-0.0122	0.0073	2.7221	0.0267	4.2748	0.072774	11.63624	0.000019	18.2736	-6.053424
6.78	-0.0071	0.0089	3.3213	0.0400	4.2324	0.132753	14.0571	0.000064	17.9133	-3.528008
6.79	-0.0063	0.0105	3.9205	0.0530	4.1734	0.207975	16.36173	0.000149	17.4170	-3.139482
6.8	-0.0071	0.0069	2.5723	0.0659	4.0979	0.169555	10.54081	0.000286	16.7924	-3.528008
6.81	-0.0071	0.0057	2.1229	0.0785	4.0062	0.166697	8.504549	0.000484	16.0493	-3.528008
6.82	-0.0067	0.0073	2.7221	0.0908	3.8987	0.247227	10.61247	0.000749	15.1995	-3.333745
6.83	-0.0059	0.0049	1.8233	0.1028	3.7758	0.187363	6.88422	0.001085	14.2565	-2.94522
6.84	-0.0048	0.0077	2.8719	0.1143	3.6380	0.328247	10.44788	0.001493	13.2349	-2.362431
6.85	-0.0067	0.0101	3.7707	0.1254	3.4858	0.472771	13.14408	0.001971	12.1511	-3.333745
6.86	-0.0071	0.0077	2.8719	0.1360	3.3199	0.390486	9.534478	0.002514	11.0220	-3.528008
6.87	-0.0005	0.0049	1.8233	0.1460	3.1409	0.266233	5.72674	0.003113	9.8655	-0.225541
6.88	-0.0067	0.0077	2.8719	0.1555	2.9495	0.446566	8.470717	0.003760	8.6997	-3.333745
6.89	-0.0051	0.0085	3.1715	0.1644	2.7465	0.521259	8.710474	0.004440	7.5432	-2.556694
6.9	-0.0075	0.0073	2.7221	0.1726	2.5326	0.469752	6.893973	0.005139	6.4141	-3.722271
6.91	-0.0067	0.0065	2.4225	0.1801	2.3087	0.436295	5.592853	0.005842	5.3303	-3.333745
6.92	-0.0083	0.0073	2.7221	0.1869	2.0757	0.508823	5.650358	0.006531	4.3087	-4.110796
6.93	-0.0083	0.0081	3.0217	0.1930	1.8346	0.58321	5.543499	0.007190	3.3656	-4.110796
6.94	-0.0079	0.0105	3.9205	0.1983	1.5862	0.777555	6.21852	0.007801	2.5159	-3.916533
6.95	-0.0051	0.0073	2.7221	0.2029	1.3315	0.552227	3.624376	0.008349	1.7728	-2.556694
6.96	-0.0075	0.0105	3.9205	0.2066	1.0715	0.810008	4.200978	0.008819	1.1482	-3.722271
6.97	-0.0051	0.0093	3.4711	0.2095	0.8074	0.727303	2.802483	0.009199	0.6519	-2.556694
6.98	-0.0067	0.0081	3.0217	0.2116	0.5400	0.639472	1.631795	0.009478	0.2916	-3.333745
6.99	-0.0087	0.0057	2.1229	0.2129	0.2705	0.451934	0.574337	0.009648	0.0732	-4.305059
7	-0.0071	0.0109	4.0703	0.2133	0.0000	0.868236	1.16E-11	0.009706	0.0000	-3.528008
7.01	-0.0087	0.0053	1.9731	0.2129	-0.2705	0.420043	-0.533808	0.009648	0.0732	-4.305059
7.02	-0.0090	0.0081	3.0217	0.2116	-0.5400	0.639472	-1.631795	0.009478	0.2916	-4.499321
7.03	-0.0087	0.0069	2.5723	0.2095	-0.8074	0.538972	-2.076797	0.009199	0.6519	-4.305059
7.04	-0.0051	0.0101	3.7707	0.2066	-1.0715	0.779057	-4.040458	0.008819	1.1482	-2.556694

7.05	-0.0087	0.0097	3.6209	0.2029	-1.3315	0.73457	-4.821131	0.008349	1.7728	-4.305059
7.06	-0.0036	0.0081	3.0217	0.1983	-1.5862	0.599291	-4.792855	0.007801	2.5159	-1.779643
7.07	-0.0071	0.0073	2.7221	0.1930	-1.8346	0.525384	-4.993849	0.007190	3.3656	-3.528008
7.08	-0.0083	0.0061	2.2727	0.1869	-2.0757	0.424818	-4.717495	0.006531	4.3087	-4.110796
7.09	-0.0083	0.0093	3.4711	0.1801	-2.3087	0.625155	-8.01385	0.005842	5.3303	-4.110796
7.1	-0.0063	0.0053	1.9731	0.1726	-2.5326	0.340493	-4.997004	0.005139	6.4141	-3.139482
7.11	-0.0102	0.0069	2.5723	0.1644	-2.7465	0.422774	-7.064739	0.004440	7.5432	-5.08211
7.12	-0.0087	0.0081	3.0217	0.1555	-2.9495	0.46986	-8.912567	0.003760	8.6997	-4.305059
7.13	-0.0075	0.0089	3.3213	0.1460	-3.1409	0.484977	-10.43197	0.003113	9.8655	-3.722271
7.14	-0.0087	0.0041	1.5237	0.1360	-3.3199	0.207169	-5.058436	0.002514	11.0220	-4.305059
7.15	-0.0067	0.0081	3.0217	0.1254	-3.4858	0.37886	-10.53312	0.001971	12.1511	-3.333745
7.16	-0.0055	0.0093	3.4711	0.1143	-3.6380	0.396736	-12.62781	0.001493	13.2349	-2.750957
7.17	-0.0083	0.0105	3.9205	0.1028	-3.7758	0.402882	-14.80295	0.001085	14.2565	-4.110796
7.18	-0.0083	0.0073	2.7221	0.0908	-3.8987	0.247227	-10.61247	0.000749	15.1995	-4.110796
7.19	-0.0083	0.0081	3.0217	0.0785	-4.0062	0.237276	-12.10537	0.000484	16.0493	-4.110796
7.2	-0.0067	0.0085	3.1715	0.0659	-4.0979	0.209053	-12.9963	0.000286	16.7924	-3.333745
7.21	-0.0051	0.0089	3.3213	0.0530	-4.1734	0.176188	-13.86099	0.000149	17.4170	-2.556694
7.22	-0.0055	0.0073	2.7221	0.0400	-4.2324	0.108802	-11.52098	0.000064	17.9133	-2.750957
7.23	-0.0059	0.0081	3.0217	0.0267	-4.2748	0.080784	-12.91699	0.000019	18.2736	-2.94522
7.24	-0.0071	0.0065	2.4225	0.0134	-4.3002	0.032446	-10.4172	0.000002	18.4920	-3.528008
7.25	-0.0067	0.0093	3.4711	0.0000	-4.3087	5.16E-13	-14.95605	0.000000	18.5652	-3.333745
7.26	-0.0067	0.0097	3.6209	-0.0134	-4.3002	-0.048498	-15.57072	-0.000002	18.4920	-3.333745
7.27	-0.0048	0.0093	3.4711	-0.0267	-4.2748	-0.092799	-14.83811	-0.000019	18.2736	-2.362431
7.28	-0.0059	0.0077	2.8719	-0.0400	-4.2324	-0.11479	-12.15501	-0.000064	17.9133	-2.94522
7.29	-0.0067	0.0085	3.1715	-0.0530	-4.1734	-0.168241	-13.2358	-0.000149	17.4170	-3.333745
7.3	-0.0098	0.0097	3.6209	-0.0659	-4.0979	-0.238676	-14.83792	-0.000286	16.7924	-4.887847
7.31	-0.0087	0.0097	3.6209	-0.0785	-4.0062	-0.284329	-14.50592	-0.000484	16.0493	-4.305059
7.32	-0.0051	0.0073	2.7221	-0.0908	-3.8987	-0.247227	-10.61247	-0.000749	15.1995	-2.556694
7.33	-0.0051	0.0061	2.2727	-0.1028	-3.7758	-0.233545	-8.581091	-0.001085	14.2565	-2.556694
7.34	-0.0063	0.0093	3.4711	-0.1143	-3.6380	-0.396736	-12.62781	-0.001493	13.2349	-3.139482
7.35	-0.0090	0.0073	2.7221	-0.1254	-3.4858	-0.341295	-9.48874	-0.001971	12.1511	-4.499321
7.36	-0.0102	0.0081	3.0217	-0.1360	-3.3199	-0.410854	-10.03182	-0.002514	11.0220	-5.08211
7.37	-0.0063	0.0077	2.8719	-0.1460	-3.1409	-0.419353	-9.020397	-0.003113	9.8655	-3.139482
7.38	-0.0055	0.0077	2.8719	-0.1555	-2.9495	-0.446566	-8.470717	-0.003760	8.6997	-2.750957
7.39	-0.0106	0.0097	3.6209	-0.1644	-2.7465	-0.595123	-9.944776	-0.004440	7.5432	-5.276373
7.4	-0.0055	0.0049	1.8233	-0.1726	-2.5326	-0.314642	-4.61761	-0.005139	6.4141	-2.750957
7.41	-0.0063	0.0081	3.0217	-0.1801	-2.3087	-0.544215	-6.97628	-0.005842	5.3303	-3.139482
7.42	-0.0051	0.0089	3.3213	-0.1869	-2.0757	-0.620831	-6.894175	-0.006531	4.3087	-2.556694
7.43	-0.0087	0.0073	2.7221	-0.1930	-1.8346	-0.525384	-4.993849	-0.007190	3.3656	-4.305059
7.44	-0.0079	0.0085	3.1715	-0.1983	-1.5862	-0.629002	-5.030466	-0.007801	2.5159	-3.916533
7.45	-0.0087	0.0105	3.9205	-0.2029	-1.3315	-0.795351	-5.22005	-0.008349	1.7728	-4.305059
7.46	-0.0040	0.0089	3.3213	-0.2066	-1.0715	-0.686206	-3.558897	-0.008819	1.1482	-1.973906
7.47	-0.0063	0.0077	2.8719	-0.2095	-0.8074	-0.601749	-2.318692	-0.009199	0.6519	-3.139482
7.48	-0.0075	0.0073	2.7221	-0.2116	-0.5400	-0.576067	-1.469999	-0.009478	0.2916	-3.722271
7.49	-0.0083	0.0077	2.8719	-0.2129	-0.2705	-0.611391	-0.776982	-0.009648	0.0732	-4.110796
7.5	-0.0055	0.0073	2.7221	-0.2133	0.0000	-0.580645	-8.56E-12	-0.009706	0.0000	-2.750957
7.51	-0.0087	0.0069	2.5723	-0.2129	0.2705	-0.547608	0.695924	-0.009648	0.0732	-4.305059
7.52	-0.0067	0.0085	3.1715	-0.2116	0.5400	-0.671174	1.712693	-0.009478	0.2916	-3.333745
7.53	-0.0102	0.0077	2.8719	-0.2095	0.8074	-0.601749	2.318692	-0.009199	0.6519	-5.08211
7.54	-0.0067	0.0089	3.3213	-0.2066	1.0715	-0.686206	3.558897	-0.008819	1.1482	-3.333745
7.55	-0.0094	0.0057	2.1229	-0.2029	1.3315	-0.430665	2.82654	-0.008349	1.7728	-4.693584
7.56	-0.0090	0.0085	3.1715	-0.1983	1.5862	-0.629002	5.030466	-0.007801	2.5159	-4.499321
7.57	-0.0126	0.0077	2.8719	-0.1930	1.8346	-0.554297	5.268674	-0.007190	3.3656	-6.247686
7.58	-0.0036	0.0061	2.2727	-0.1869	2.0757	-0.424818	4.717495	-0.006531	4.3087	-1.779643
7.59	-0.0048	0.0077	2.8719	-0.1801	2.3087	-0.517235	6.630423	-0.005842	5.3303	-2.362431
7.6	-0.0055	0.0085	3.1715	-0.1726	2.5326	-0.547307	8.032155	-0.005139	6.4141	-2.750957
7.61	-0.0102	0.0093	3.4711	-0.1644	2.7465	-0.570502	9.533342	-0.004440	7.5432	-5.08211
7.62	-0.0059	0.0073	2.7221	-0.1555	2.9495	-0.423272	8.028867	-0.003760	8.6997	-2.94522
7.63	-0.0122	0.0085	3.1715	-0.1460	3.1409	-0.463102	9.961442	-0.003113	9.8655	-6.053424
7.64	-0.0102	0.0097	3.6209	-0.1360	3.3199	-0.492329	12.02117	-0.002514	11.0220	-5.08211
7.65	-0.0067	0.0065	2.4225	-0.1254	3.4858	-0.30373	8.444358	-0.001971	12.1511	-3.333745
7.66	-0.0071	0.0073	2.7221	-0.1143	3.6380	-0.311125	9.902892	-0.001493	13.2349	-3.528008
7.67	-0.0055	0.0065	2.4225	-0.1028	3.7758	-0.24894	9.146715	-0.001085	14.2565	-2.750957
7.68	-0.0106	0.0077	2.8719	-0.0908	3.8987	-0.260832	11.1965	-0.000749	15.1995	-5.276373
7.69	-0.0083	0.0053	1.9731	-0.0785	4.0062	-0.154934	7.904412	-0.000484	16.0493	-4.110796
7.7	-0.0055	0.0085	3.1715	-0.0659	4.0979	-0.209053	12.9963	-0.000286	16.7924	-2.750957
7.71	-0.0090	0.0077	2.8719	-0.0530	4.1734	-0.152347	11.98543	-0.000149	17.4170	-4.499321
7.72	-0.0094	0.0089	3.3213	-0.0400	4.2324	-0.132753	14.0571	-0.000064	17.9133	-4.693584
7.73	-0.0071	0.0069	2.5723	-0.0267	4.2748	-0.068769	10.99587	-0.000019	18.2736	-3.528008
7.74	-0.0110	0.0077	2.8719	-0.0134	4.3002	-0.038465	12.34977	-0.000002	18.4920	-5.470635
7.75	-0.0016	0.0081	3.0217	0.0000	4.3087	-4.92E-13	13.01965	0.000000	18.5652	-0.808329

7.76	-0.0067	0.0089	3.3213	0.0134	4.3002	0.044485	14.28234	0.000002	18.4920	-3.333745
7.77	-0.0055	0.0061	2.2727	0.0267	4.2748	0.060759	9.715122	0.000019	18.2736	-2.750957
7.78	-0.0048	0.0085	3.1715	0.0400	4.2324	0.126765	13.42307	0.000064	17.9133	-2.362431
7.79	-0.0055	0.0089	3.3213	0.0530	4.1734	0.176188	13.86099	0.000149	17.4170	-2.750957
7.8	-0.0071	0.0081	3.0217	0.0659	4.0979	0.199178	12.38243	0.000286	16.7924	-3.528008
7.81	-0.0079	0.0093	3.4711	0.0785	4.0062	0.272566	13.90578	0.000484	16.0493	-3.916533
7.82	-0.0075	0.0101	3.7707	0.0908	3.8987	0.342466	14.7007	0.000749	15.1995	-3.722271
7.83	-0.0063	0.0081	3.0217	0.1028	3.7758	0.310516	11.40921	0.001085	14.2565	-3.139482
7.84	-0.0059	0.0073	2.7221	0.1143	3.6380	0.311125	9.902892	0.001493	13.2349	-2.94522
7.85	-0.0048	0.0101	3.7707	0.1254	3.4858	0.472771	13.14408	0.001971	12.1511	-2.362431
7.86	-0.0106	0.0073	2.7221	0.1360	3.3199	0.370117	9.03714	0.002514	11.0220	-5.276373
7.87	-0.0051	0.0065	2.4225	0.1460	3.1409	0.35373	7.608829	0.003113	9.8655	-2.556694
7.88	-0.0098	0.0093	3.4711	0.1555	2.9495	0.539741	10.23812	0.003760	8.6997	-4.887847
7.89	-0.0106	0.0121	4.5197	0.1644	2.7465	0.742851	12.41338	0.004440	7.5432	-5.276373
7.9	-0.0079	0.0081	3.0217	0.1726	2.5326	0.521455	7.652761	0.005139	6.4141	-3.916533
7.91	-0.0063	0.0053	1.9731	0.1801	2.3087	0.355355	4.555284	0.005842	5.3303	-3.139482
7.92	-0.0075	0.0073	2.7221	0.1869	2.0757	0.508823	5.650358	0.006531	4.3087	-3.722271
7.93	-0.0110	0.0101	3.7707	0.1930	1.8346	0.727777	6.917624	0.007190	3.3656	-5.470635
7.94	-0.0087	0.0117	4.3699	0.1983	1.5862	0.866686	6.931353	0.007801	2.5159	-4.305059
7.95	-0.0079	0.0073	2.7221	0.2029	1.3315	0.552227	3.624376	0.008349	1.7728	-3.916533
7.96	-0.0071	0.0109	4.0703	0.2066	1.0715	0.840958	4.361498	0.008819	1.1482	-3.528008
7.97	-0.0071	0.0069	2.5723	0.2095	0.8074	0.538972	2.076797	0.009199	0.6519	-3.528008
7.98	-0.0098	0.0093	3.4711	0.2116	0.5400	0.734579	1.874489	0.009478	0.2916	-4.887847
7.99	-0.0012	0.0069	2.5723	0.2129	0.2705	0.547608	0.695924	0.009648	0.0732	-0.614067
8	-0.0055	0.0089	3.3213	0.2133	0.0000	0.708463	1.14E-11	0.009706	0.0000	-2.750957
8.01	-0.0059	0.0077	2.8719	0.2129	-0.2705	0.611391	-0.776982	0.009648	0.0732	-2.94522
8.02	-0.0075	0.0077	2.8719	0.2116	-0.5400	0.607769	-1.550897	0.009478	0.2916	-3.722271
8.03	-0.0090	0.0069	2.5723	0.2095	-0.8074	0.538972	-2.076797	0.009199	0.6519	-4.499321
8.04	-0.0106	0.0097	3.6209	0.2066	-1.0715	0.748107	-3.879937	0.008819	1.1482	-5.276373
8.05	-0.0059	0.0085	3.1715	0.2029	-1.3315	0.643398	-4.222754	0.008349	1.7728	-2.94522
8.06	-0.0071	0.0073	2.7221	0.1983	-1.5862	0.53987	-4.317633	0.007801	2.5159	-3.528008
8.07	-0.0040	0.0089	3.3213	0.1930	-1.8346	0.641037	-6.093149	0.007190	3.3656	-1.973906
8.08	-0.0067	0.0077	2.8719	0.1869	-2.0757	0.536825	-5.961312	0.006531	4.3087	-3.333745
8.09	-0.0051	0.0065	2.4225	0.1801	-2.3087	0.436295	-5.592853	0.005842	5.3303	-2.556694
8.1	-0.0075	0.0085	3.1715	0.1726	-2.5326	0.547307	-8.032155	0.005139	6.4141	-3.722271
8.11	-0.0083	0.0085	3.1715	0.1644	-2.7465	0.521259	-8.710474	0.004440	7.5432	-4.110796
8.12	-0.0083	0.0089	3.3213	0.1555	-2.9495	0.516448	-9.796267	0.003760	8.6997	-4.110796
8.13	-0.0083	0.0089	3.3213	0.1460	-3.1409	0.484977	-10.43197	0.003113	9.8655	-4.110796
8.14	-0.0067	0.0085	3.1715	0.1360	-3.3199	0.431223	-10.52915	0.002514	11.0220	-3.333745
8.15	-0.0059	0.0089	3.3213	0.1254	-3.4858	0.416424	-11.5775	0.001971	12.1511	-2.94522
8.16	-0.0083	0.0101	3.7707	0.1143	-3.6380	0.43098	-13.71777	0.001493	13.2349	-4.110796
8.17	-0.0063	0.0077	2.8719	0.1028	-3.7758	0.295122	-10.84359	0.001085	14.2565	-3.139482
8.18	-0.0063	0.0069	2.5723	0.0908	-3.8987	0.233621	-10.02844	0.000749	15.1995	-3.139482
8.19	-0.0063	0.0065	2.4225	0.0785	-4.0062	0.190223	-9.704822	0.000484	16.0493	-3.139482
8.2	-0.0067	0.0085	3.1715	0.0659	-4.0979	0.209053	-12.9963	0.000286	16.7924	-3.333745
8.21	-0.0071	0.0065	2.4225	0.0530	-4.1734	0.128507	-10.10988	0.000149	17.4170	-3.528008
8.22	-0.0090	0.0073	2.7221	0.0400	-4.2324	0.108802	-11.52098	0.000064	17.9133	-4.499321
8.23	-0.0075	0.0085	3.1715	0.0267	-4.2748	0.084789	-13.55736	0.000019	18.2736	-3.722271
8.24	-0.0067	0.0085	3.1715	0.0134	-4.3002	0.042478	-13.63815	0.000002	18.4920	-3.333745
8.25	-0.0071	0.0065	2.4225	0.0000	-4.3087	4.26E-13	-10.4378	0.000000	18.5652	-3.528008
8.26	-0.0059	0.0085	3.1715	-0.0134	-4.3002	-0.042478	-13.63815	-0.000002	18.4920	-2.94522
8.27	-0.0090	0.0089	3.3213	-0.0267	-4.2748	-0.088794	-14.19774	-0.000019	18.2736	-4.499321
8.28	-0.0036	0.0073	2.7221	-0.0400	-4.2324	-0.108802	-11.52098	-0.000064	17.9133	-1.779643
8.29	-0.0079	0.0089	3.3213	-0.0530	-4.1734	-0.176188	-13.86099	-0.000149	17.4170	-3.916533
8.3	-0.0055	0.0105	3.9205	-0.0659	-4.0979	-0.258425	-16.06566	-0.000286	16.7924	-2.750957
8.31	-0.0075	0.0073	2.7221	-0.0785	-4.0062	-0.21375	-10.9051	-0.000484	16.0493	-3.722271
8.32	-0.0094	0.0065	2.4225	-0.0908	-3.8987	-0.220016	-9.444405	-0.000749	15.1995	-4.693584
8.33	-0.0071	0.0077	2.8719	-0.1028	-3.7758	-0.295122	-10.84359	-0.001085	14.2565	-3.528008
8.34	-0.0036	0.0073	2.7221	-0.1143	-3.6380	-0.311125	-9.902892	-0.001493	13.2349	-1.779643
8.35	-0.0083	0.0069	2.5723	-0.1254	-3.4858	-0.322512	-8.966549	-0.001971	12.1511	-4.110796
8.36	-0.0063	0.0089	3.3213	-0.1360	-3.3199	-0.451592	-11.02649	-0.002514	11.0220	-3.139482
8.37	-0.0083	0.0081	3.0217	-0.1460	-3.1409	-0.441228	-9.49092	-0.003113	9.8655	-4.110796
8.38	-0.0087	0.0101	3.7707	-0.1555	-2.9495	-0.586329	-11.12182	-0.003760	8.6997	-4.305059
8.39	-0.0032	0.0073	2.7221	-0.1644	-2.7465	-0.447395	-7.476173	-0.004440	7.5432	-1.58538
8.4	-0.0083	0.0073	2.7221	-0.1726	-2.5326	-0.469752	-6.893973	-0.005139	6.4141	-4.110796
8.41	-0.0036	0.0085	3.1715	-0.1801	-2.3087	-0.571195	-7.322136	-0.005842	5.3303	-1.779643
8.42	-0.0094	0.0105	3.9205	-0.1869	-2.0757	-0.732839	-8.137993	-0.006531	4.3087	-4.693584
8.43	-0.0079	0.0097	3.6209	-0.1930	-1.8346	-0.698863	-6.642799	-0.007190	3.3656	-3.916533
8.44	-0.0071	0.0065	2.4225	-0.1983	-1.5862	-0.480449	-3.842411	-0.007801	2.5159	-3.528008
8.45	-0.0048	0.0109	4.0703	-0.2029	-1.3315	-0.825741	-5.419509	-0.008349	1.7728	-2.362431
8.46	-0.0098	0.0089	3.3213	-0.2066	-1.0715	-0.686206	-3.558897	-0.008819	1.1482	-4.887847

8.47	-0.0055	0.0053	1.9731	-0.2095	-0.8074	-0.413418	-1.593006	-0.009199	0.6519	-2.750957
8.48	-0.0106	0.0081	3.0217	-0.2116	-0.5400	-0.639472	-1.631795	-0.009478	0.2916	-5.276373
8.49	-0.0083	0.0077	2.8719	-0.2129	-0.2705	-0.611391	-0.776982	-0.009648	0.0732	-4.110796
8.5	-0.0059	0.0081	3.0217	-0.2133	0.0000	-0.644554	-1.12E-11	-0.009706	0.0000	-2.94522
8.51	-0.0087	0.0085	3.1715	-0.2129	0.2705	-0.675174	0.85804	-0.009648	0.0732	-4.305059
8.52	-0.0067	0.0065	2.4225	-0.2116	0.5400	-0.512662	1.308203	-0.009478	0.2916	-3.333745
8.53	-0.0122	0.0089	3.3213	-0.2095	0.8074	-0.695914	2.681536	-0.009199	0.6519	-6.053424
8.54	-0.0067	0.0093	3.4711	-0.2066	1.0715	-0.717156	3.719417	-0.008819	1.1482	-3.333745
8.55	-0.0094	0.0077	2.8719	-0.2029	1.3315	-0.582617	3.823835	-0.008349	1.7728	-4.693584
8.56	-0.0063	0.0049	1.8233	-0.1983	1.5862	-0.361607	2.891967	-0.007801	2.5159	-3.139482
8.57	-0.0071	0.0101	3.7707	-0.1930	1.8346	-0.727777	6.917624	-0.007190	3.3656	-3.528008
8.58	-0.0063	0.0077	2.8719	-0.1869	2.0757	-0.536825	5.961312	-0.006531	4.3087	-3.139482
8.59	-0.0071	0.0077	2.8719	-0.1801	2.3087	-0.517235	6.630423	-0.005842	5.3303	-3.528008
8.6	-0.0044	0.0077	2.8719	-0.1726	2.5326	-0.495604	7.273367	-0.005139	6.4141	-2.168169
8.61	-0.0032	0.0057	2.1229	-0.1644	2.7465	-0.34891	5.830437	-0.004440	7.5432	-1.58538
8.62	-0.0087	0.0077	2.8719	-0.1555	2.9495	-0.446566	8.470717	-0.003760	8.6997	-4.305059
8.63	-0.0083	0.0097	3.6209	-0.1460	3.1409	-0.528725	11.37301	-0.003113	9.8655	-4.110796
8.64	-0.0094	0.0069	2.5723	-0.1360	3.3199	-0.349749	8.539802	-0.002514	11.0220	-4.693584
8.65	-0.0083	0.0057	2.1229	-0.1254	3.4858	-0.266165	7.399977	-0.001971	12.1511	-4.110796
8.66	-0.0075	0.0093	3.4711	-0.1143	3.6380	-0.396736	12.62781	-0.001493	13.2349	-3.722271
8.67	-0.0044	0.0081	3.0217	-0.1028	3.7758	-0.310516	11.40921	-0.001085	14.2565	-2.168169
8.68	-0.0079	0.0117	4.3699	-0.0908	3.8987	-0.396888	17.03683	-0.000749	15.1995	-3.916533
8.69	-0.0040	0.0081	3.0217	-0.0785	4.0062	-0.237276	12.10537	-0.000484	16.0493	-1.973906
8.7	-0.0083	0.0065	2.4225	-0.0659	4.0979	-0.15968	9.926939	-0.000286	16.7924	-4.110796
8.71	-0.0122	0.0069	2.5723	-0.0530	4.1734	-0.136454	10.73506	-0.000149	17.4170	-6.053424
8.72	-0.0044	0.0073	2.7221	-0.0400	4.2324	-0.108802	11.52098	-0.000064	17.9133	-2.168169
8.73	-0.0059	0.0101	3.7707	-0.0267	4.2748	-0.100809	16.11886	-0.000019	18.2736	-2.94522
8.74	-0.0075	0.0089	3.3213	-0.0134	4.3002	-0.044485	14.28234	-0.000002	18.4920	-3.722271
8.75	-0.0020	0.0085	3.1715	0.0000	4.3087	-6.04E-13	13.66512	0.000000	18.5652	-1.002592
8.76	-0.0028	0.0073	2.7221	0.0134	4.3002	0.036459	11.70558	0.000002	18.4920	-1.391118
8.77	-0.0071	0.0065	2.4225	0.0267	4.2748	0.064764	10.3555	0.000019	18.2736	-3.528008
8.78	-0.0071	0.0081	3.0217	0.0400	4.2324	0.120777	12.78904	0.000064	17.9133	-3.528008
8.79	-0.0063	0.0069	2.5723	0.0530	4.1734	0.136454	10.73506	0.000149	17.4170	-3.139482
8.8	-0.0067	0.0073	2.7221	0.0659	4.0979	0.179429	11.15468	0.000286	16.7924	-3.333745
8.81	-0.0083	0.0061	2.2727	0.0785	4.0062	0.17846	9.104685	0.000484	16.0493	-4.110796
8.82	-0.0059	0.0073	2.7221	0.0908	3.8987	0.247227	10.61247	0.000749	15.1995	-2.94522
8.83	-0.0075	0.0061	2.2727	0.1028	3.7758	0.233545	8.581091	0.001085	14.2565	-3.722271
8.84	-0.0044	0.0093	3.4711	0.1143	3.6380	0.396736	12.62781	0.001493	13.2349	-2.168169
8.85	-0.0063	0.0101	3.7707	0.1254	3.4858	0.472771	13.14408	0.001971	12.1511	-3.139482
8.86	-0.0090	0.0057	2.1229	0.1360	3.3199	0.288643	7.047788	0.002514	11.0220	-4.499321
8.87	-0.0040	0.0105	3.9205	0.1460	3.1409	0.572474	12.31406	0.003113	9.8655	-1.973906
8.88	-0.0075	0.0077	2.8719	0.1555	2.9495	0.446566	8.470717	0.003760	8.6997	-3.722271
8.89	-0.0051	0.0093	3.4711	0.1644	2.7465	0.570502	9.533342	0.004440	7.5432	-2.556694
8.9	-0.0067	0.0065	2.4225	0.1726	2.5326	0.418049	6.135186	0.005139	6.4141	-3.333745
8.91	-0.0075	0.0105	3.9205	0.1801	2.3087	0.706096	9.05142	0.005842	5.3303	-3.722271
8.92	-0.0110	0.0065	2.4225	0.1869	2.0757	0.45282	5.028449	0.006531	4.3087	-5.470635
8.93	-0.0044	0.0065	2.4225	0.1930	1.8346	0.467557	4.4442	0.007190	3.3656	-2.168169
8.94	-0.0075	0.0069	2.5723	0.1983	1.5862	0.51016	4.080022	0.007801	2.5159	-3.722271
8.95	-0.0083	0.0073	2.7221	0.2029	1.3315	0.552227	3.624376	0.008349	1.7728	-4.110796
8.96	-0.0083	0.0073	2.7221	0.2066	1.0715	0.562403	2.916816	0.008819	1.1482	-4.110796
8.97	-0.0079	0.0061	2.2727	0.2095	0.8074	0.476195	1.834901	0.009199	0.6519	-3.916533
8.98	-0.0090	0.0097	3.6209	0.2116	0.5400	0.766282	1.955388	0.009478	0.2916	-4.499321
8.99	-0.0071	0.0069	2.5723	0.2129	0.2705	0.547608	0.695924	0.009648	0.0732	-3.528008
9	-0.0110	0.0089	3.3213	0.2133	0.0000	0.708463	1.33E-11	0.009706	0.0000	-5.470635
9.01	-0.0087	0.0089	3.3213	0.2129	-0.2705	0.707065	-0.898569	0.009648	0.0732	-4.305059
9.02	-0.0090	0.0077	2.8719	0.2116	-0.5400	0.607769	-1.550897	0.009478	0.2916	-4.499321
9.03	-0.0114	0.0089	3.3213	0.2095	-0.8074	0.695914	-2.681536	0.009199	0.6519	-5.664898
9.04	-0.0075	0.0073	2.7221	0.2066	-1.0715	0.562403	-2.916816	0.008819	1.1482	-3.722271
9.05	-0.0055	0.0089	3.3213	0.2029	-1.3315	0.673789	-4.422213	0.008349	1.7728	-2.750957
9.06	-0.0051	0.0029	1.0742	0.1983	-1.5862	0.213055	-1.703913	0.007801	2.5159	-2.556694
9.07	-0.0079	0.0081	3.0217	0.1930	-1.8346	0.58321	-5.543499	0.007190	3.3656	-3.916533
9.08	-0.0083	0.0097	3.6209	0.1869	-2.0757	0.676835	-7.516084	0.006531	4.3087	-4.110796
9.09	-0.0051	0.0089	3.3213	0.1801	-2.3087	0.598175	-7.667993	0.005842	5.3303	-2.556694
9.1	-0.0083	0.0097	3.6209	0.1726	-2.5326	0.624862	-9.170337	0.005139	6.4141	-4.110796
9.11	-0.0094	0.0085	3.1715	0.1644	-2.7465	0.521259	-8.710474	0.004440	7.5432	-4.693584
9.12	-0.0040	0.0069	2.5723	0.1555	-2.9495	0.399978	-7.587017	0.003760	8.6997	-1.973906
9.13	-0.0079	0.0089	3.3213	0.1460	-3.1409	0.484977	-10.43197	0.003113	9.8655	-3.916533
9.14	-0.0090	0.0065	2.4225	0.1360	-3.3199	0.32938	-8.042464	0.002514	11.0220	-4.499321
9.15	-0.0048	0.0081	3.0217	0.1254	-3.4858	0.37886	-10.53312	0.001971	12.1511	-2.362431
9.16	-0.0071	0.0097	3.6209	0.1143	-3.6380	0.413858	-13.17279	0.001493	13.2349	-3.528008
9.17	-0.0098	0.0105	3.9205	0.1028	-3.7758	0.402882	-14.80295	0.001085	14.2565	-4.887847

9.18	-0.0102	0.0073	2.7221	0.0908	-3.8987	0.247227	-10.61247	0.000749	15.1995	-5.08211
9.19	-0.0102	0.0109	4.0703	0.0785	-4.0062	0.319619	-16.30633	0.000484	16.0493	-5.08211
9.2	-0.0087	0.0089	3.3213	0.0659	-4.0979	0.218927	-13.61017	0.000286	16.7924	-4.305059
9.21	-0.0102	0.0081	3.0217	0.0530	-4.1734	0.160294	-12.61062	0.000149	17.4170	-5.08211
9.22	-0.0048	0.0081	3.0217	0.0400	-4.2324	0.120777	-12.78904	0.000064	17.9133	-2.362431
9.23	-0.0098	0.0053	1.9731	0.0267	-4.2748	0.052749	-8.434375	0.000019	18.2736	-4.887847
9.24	-0.0059	0.0089	3.3213	0.0134	-4.3002	0.044485	-14.28234	0.000002	18.4920	-2.94522
9.25	-0.0083	0.0089	3.3213	0.0000	-4.3087	6.8E-13	-14.31058	0.000000	18.5652	-4.110796
9.26	-0.0090	0.0089	3.3213	-0.0134	-4.3002	-0.044485	-14.28234	-0.000002	18.4920	-4.499321
9.27	-0.0067	0.0105	3.9205	-0.0267	-4.2748	-0.104814	-16.75923	-0.000019	18.2736	-3.333745
9.28	-0.0083	0.0093	3.4711	-0.0400	-4.2324	-0.13874	-14.69113	-0.000064	17.9133	-4.110796
9.29	-0.0079	0.0085	3.1715	-0.0530	-4.1734	-0.168241	-13.2358	-0.000149	17.4170	-3.916533
9.3	-0.0051	0.0065	2.4225	-0.0659	-4.0979	-0.15968	-9.926939	-0.000286	16.7924	-2.556694
9.31	-0.0075	0.0097	3.6209	-0.0785	-4.0062	-0.284329	-14.50592	-0.000484	16.0493	-3.722271
9.32	-0.0102	0.0089	3.3213	-0.0908	-3.8987	-0.301649	-12.9486	-0.000749	15.1995	-5.08211
9.33	-0.0075	0.0089	3.3213	-0.1028	-3.7758	-0.341305	-12.54046	-0.001085	14.2565	-3.722271
9.34	-0.0071	0.0057	2.1229	-0.1143	-3.6380	-0.242637	-7.722962	-0.001493	13.2349	-3.528008
9.35	-0.0079	0.0073	2.7221	-0.1254	-3.4858	-0.341295	-9.48874	-0.001971	12.1511	-3.916533
9.36	-0.0067	0.0065	2.4225	-0.1360	-3.3199	-0.32938	-8.042464	-0.002514	11.0220	-3.333745
9.37	-0.0067	0.0081	3.0217	-0.1460	-3.1409	-0.441228	-9.49092	-0.003113	9.8655	-3.333745
9.38	-0.0094	0.0081	3.0217	-0.1555	-2.9495	-0.46986	-8.912567	-0.003760	8.6997	-4.693584
9.39	-0.0032	0.0097	3.6209	-0.1644	-2.7465	-0.595123	-9.944776	-0.004440	7.5432	-1.58538
9.4	-0.0094	0.0069	2.5723	-0.1726	-2.5326	-0.4439	-6.514579	-0.005139	6.4141	-4.693584
9.41	-0.0036	0.0053	1.9731	-0.1801	-2.3087	-0.355355	-4.555284	-0.005842	5.3303	-1.779643
9.42	-0.0090	0.0069	2.5723	-0.1869	-2.0757	-0.480822	-5.339403	-0.006531	4.3087	-4.499321
9.43	-0.0059	0.0105	3.9205	-0.1930	-1.8346	-0.75669	-7.192449	-0.007190	3.3656	-2.94522
9.44	-0.0059	0.0069	2.5723	-0.1983	-1.5862	-0.51016	-4.080022	-0.007801	2.5159	-2.94522
9.45	-0.0055	0.0081	3.0217	-0.2029	-1.3315	-0.613008	-4.023295	-0.008349	1.7728	-2.750957
9.46	-0.0094	0.0089	3.3213	-0.2066	-1.0715	-0.686206	-3.558897	-0.008819	1.1482	-4.693584
9.47	-0.0040	0.0077	2.8719	-0.2095	-0.8074	-0.601749	-2.318692	-0.009199	0.6519	-1.973906
9.48	-0.0051	0.0077	2.8719	-0.2116	-0.5400	-0.607769	-1.550897	-0.009478	0.2916	-2.556694
9.49	-0.0079	0.0077	2.8719	-0.2129	-0.2705	-0.611391	-0.776982	-0.009648	0.0732	-3.916533
9.5	-0.0071	0.0081	3.0217	-0.2133	0.0000	-0.644554	-1.29E-11	-0.009706	0.0000	-3.528008
9.51	-0.0083	0.0089	3.3213	-0.2129	0.2705	-0.707065	0.898569	-0.009648	0.0732	-4.110796
9.52	-0.0102	0.0097	3.6209	-0.2116	0.5400	-0.766282	1.955388	-0.009478	0.2916	-5.08211
9.53	-0.0036	0.0077	2.8719	-0.2095	0.8074	-0.601749	2.318692	-0.009199	0.6519	-1.779643
9.54	-0.0067	0.0085	3.1715	-0.2066	1.0715	-0.655255	3.398377	-0.008819	1.1482	-3.333745
9.55	-0.0079	0.0061	2.2727	-0.2029	1.3315	-0.461055	3.025999	-0.008349	1.7728	-3.916533
9.56	-0.0063	0.0065	2.4225	-0.1983	1.5862	-0.480449	3.842411	-0.007801	2.5159	-3.139482
9.57	-0.0063	0.0081	3.0217	-0.1930	1.8346	-0.58321	5.543499	-0.007190	3.3656	-3.139482
9.58	-0.0075	0.0061	2.2727	-0.1869	2.0757	-0.424818	4.717495	-0.006531	4.3087	-3.722271
9.59	-0.0087	0.0081	3.0217	-0.1801	2.3087	-0.544215	6.97628	-0.005842	5.3303	-4.305059
9.6	-0.0083	0.0077	2.8719	-0.1726	2.5326	-0.495604	7.273367	-0.005139	6.4141	-4.110796
9.61	-0.0071	0.0101	3.7707	-0.1644	2.7465	-0.619744	10.35621	-0.004440	7.5432	-3.528008
9.62	-0.0055	0.0097	3.6209	-0.1555	2.9495	-0.563035	10.67997	-0.003760	8.6997	-2.750957
9.63	-0.0126	0.0077	2.8719	-0.1460	3.1409	-0.419353	9.020397	-0.003113	9.8655	-6.247686
9.64	-0.0102	0.0073	2.7221	-0.1360	3.3199	-0.370117	9.03714	-0.002514	11.0220	-5.08211
9.65	-0.0079	0.0069	2.5723	-0.1254	3.4858	-0.322512	8.966549	-0.001971	12.1511	-3.916533
9.66	-0.0079	0.0081	3.0217	-0.1143	3.6380	-0.345369	10.99286	-0.001493	13.2349	-3.916533
9.67	-0.0079	0.0089	3.3213	-0.1028	3.7758	-0.341305	12.54046	-0.001085	14.2565	-3.916533
9.68	-0.0071	0.0065	2.4225	-0.0908	3.8987	-0.220016	9.444405	-0.000749	15.1995	-3.528008
9.69	-0.0040	0.0069	2.5723	-0.0785	4.0062	-0.201987	10.30496	-0.000484	16.0493	-1.973906
9.7	-0.0059	0.0097	3.6209	-0.0659	4.0979	-0.238676	14.83792	-0.000286	16.7924	-2.94522
9.71	-0.0055	0.0073	2.7221	-0.0530	4.1734	-0.144401	11.36025	-0.000149	17.4170	-2.750957
9.72	-0.0075	0.0069	2.5723	-0.0400	4.2324	-0.102814	10.88695	-0.000064	17.9133	-3.722271
9.73	-0.0090	0.0089	3.3213	-0.0267	4.2748	-0.088794	14.19774	-0.000019	18.2736	-4.499321
9.74	-0.0094	0.0077	2.8719	-0.0134	4.3002	-0.038465	12.34977	-0.000002	18.4920	-4.693584
9.75	-0.0102	0.0085	3.1715	0.0000	4.3087	-6.95E-13	13.66512	0.000000	18.5652	-5.08211
9.76	-0.0094	0.0085	3.1715	0.0134	4.3002	0.042478	13.63815	0.000002	18.4920	-4.693584
9.77	-0.0083	0.0097	3.6209	0.0267	4.2748	0.096804	15.47849	0.000019	18.2736	-4.110796
9.78	-0.0079	0.0113	4.2201	0.0400	4.2324	0.168679	17.86128	0.000064	17.9133	-3.916533
9.79	-0.0048	0.0073	2.7221	0.0530	4.1734	0.144401	11.36025	0.000149	17.4170	-2.362431
9.8	-0.0071	0.0089	3.3213	0.0659	4.0979	0.218927	13.61017	0.000286	16.7924	-3.528008
9.81	-0.0071	0.0061	2.2727	0.0785	4.0062	0.17846	9.104685	0.000484	16.0493	-3.528008
9.82	-0.0059	0.0089	3.3213	0.0908	3.8987	0.301649	12.9486	0.000749	15.1995	-2.94522
9.83	-0.0079	0.0101	3.7707	0.1028	3.7758	0.387487	14.23733	0.001085	14.2565	-3.916533
9.84	-0.0118	0.0113	4.2201	0.1143	3.6380	0.482346	15.35272	0.001493	13.2349	-5.859161
9.85	-0.0083	0.0065	2.4225	0.1254	3.4858	0.30373	8.444358	0.001971	12.1511	-4.110796
9.86	-0.0055	0.0077	2.8719	0.1360	3.3199	0.390486	9.534478	0.002514	11.0220	-2.750957
9.87	-0.0036	0.0077	2.8719	0.1460	3.1409	0.419353	9.020397	0.003113	9.8655	-1.779643
9.88	-0.0094	0.0101	3.7707	0.1555	2.9495	0.586329	11.12182	0.003760	8.6997	-4.693584

silinder tegak H6

9.89	-0.0051	0.0077	2.8719	0.1644	2.7465	0.472016	7.887606	0.004440	7.5432	-2.556694
9.9	-0.0079	0.0069	2.5723	0.1726	2.5326	0.4439	6.514579	0.005139	6.4141	-3.916533
9.91	-0.0118	0.0097	3.6209	0.1801	2.3087	0.652135	8.359706	0.005842	5.3303	-5.859161
9.92	-0.0075	0.0097	3.6209	0.1869	2.0757	0.676835	7.516084	0.006531	4.3087	-3.722271
9.93	-0.0102	0.0069	2.5723	0.1930	1.8346	0.49647	4.719024	0.007190	3.3656	-5.08211
9.94	-0.0106	0.0101	3.7707	0.1983	1.5862	0.747844	5.980909	0.007801	2.5159	-5.276373
9.95	-0.0071	0.0073	2.7221	0.2029	1.3315	0.552227	3.624376	0.008349	1.7728	-3.528008
9.96	-0.0071	0.0073	2.7221	0.2066	1.0715	0.562403	2.916816	0.008819	1.1482	-3.528008
9.97	-0.0075	0.0069	2.5723	0.2095	0.8074	0.538972	2.076797	0.009199	0.6519	-3.722271
9.98	-0.0051	0.0085	3.1715	0.2116	0.5400	0.671174	1.712693	0.009478	0.2916	-2.556694
9.99	-0.0024	0.0065	2.4225	0.2129	0.2705	0.515717	0.655395	0.009648	0.0732	-1.196855
10	-0.0028	0.0085	3.1715	0.2133	0.0000	0.676509	1.45E-11	0.009706	0.0000	-1.392312
		rata-rata	4.9691		0.7989					-0.14391
			max	0.2133	rata-rata	0.219774	-3.146767	0.00300	0.1857	

A= 73.17621 B= -16.9498
cd= 1.440 cm = 2.091

Kc 2.099501 Cl = 1.331

0 drajad H2

Model POTONGAN KAKI JAKET
Posisi NOL DRAJAT
H : 2 Cm

Perioda : 2 detik
waktu : 10 detik

t	SG trans	SG longitu	F long	u	u dot	u^3	u dot^2	F trans	Fbrce long	Fbrce long	Fbrce tran	Fbrce tran	Frata	F rata *u	Frata*udot	Flong -	Ftans -	Frata
det	Eta 1	Eta 2	N	m/det	m/det^2			N	horisontal	miring	horisontal	miring	longitu	N	N	2F long sil	2F tran sil	trans
0.01	-0.000333	0.005796	2.1620	0.0408	-0.0108	0.000068	0.0001	-0.165579	0.295104	0.232537	-0.095168	-0.074991	4.7098	0.0576275	-0.002606	0.8853	-0.285504	-0.151887
0.02	0.00047	0.008921	3.3276	0.0405	-0.0215	0.000067	0.0005	0.233897	0.093422	0.073615	-0.228326	-0.179917	1.4910	0.141684	-0.075075	0.2803	-0.684979	-0.364408
0.03	-0.0007	0.0105	3.9104	0.0401	-0.0321	0.000065	0.0010	-0.365317	0.287685	0.226691	0.028589	0.022527	4.5914	0.1776177	-0.142117	0.8631	0.085766	0.045627
0.04	-0.0031	0.0046	1.7249	0.0396	-0.0426	0.000062	0.0018	-1.563744	-0.440801	-0.347343	-0.370887	-0.292253	-7.0352	0.0370789	-0.039932	-1.3224	-1.112662	-0.591934
0.05	0.0009	0.0089	3.3276	0.0389	-0.0530	0.000059	0.0028	0.433635	0.093422	0.073615	0.294906	0.232381	1.4910	0.1358205	-0.185103	0.2803	0.884717	0.470668
0.06	0.0013	0.0015	0.5593	0.0380	-0.0631	0.000055	0.0040	0.633373	0.829326	0.653495	0.361485	0.284844	1.3236	0.0775937	-0.128859	2.4880	1.084455	0.576928
0.07	-0.0015	0.0062	2.3077	0.0370	-0.0730	0.000051	0.0053	-0.764792	0.246538	0.194268	-0.10457	-0.082399	3.9347	0.1016299	-0.200591	0.7396	-0.31371	-0.166893
0.08	0.0001	0.0070	2.5991	0.0358	-0.0826	0.000046	0.0068	0.034159	0.149407	0.11773	0.161747	0.127454	2.3845	0.1026424	-0.236683	0.4482	0.485242	0.258148
0.09	-0.0011	0.0081	3.0362	0.0345	-0.0918	0.000041	0.0084	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	0.1049897	-0.279467	0.0111	-0.113972	-0.060633
0.1	-0.0027	0.0085	3.1819	0.0331	-0.1008	0.000036	0.0102	-1.364006	0.044856	0.035346	-0.304308	-0.23979	0.7159	0.107848	-0.328658	0.1346	-0.912924	-0.485674
0.11	0.0001	0.0074	2.7448	0.0315	-0.1093	0.000031	0.0119	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	0.0921041	-0.319594	0.3025	0.485242	0.258148
0.12	-0.0007	0.0070	2.5991	0.0298	-0.1173	0.000026	0.0138	-0.365317	0.149407	0.11773	0.028589	0.022527	2.3845	0.0853846	-0.336314	0.4482	0.085766	0.045627
0.13	-0.0007	0.0066	2.4534	0.0280	-0.1250	0.000022	0.0156	-0.365317	0.197972	0.155999	0.028589	0.022527	3.1596	0.0785348	-0.350783	0.5939	0.085766	0.045627
0.14	0.0005	0.0077	2.8905	0.0260	-0.1321	0.000018	0.0174	0.233897	0.052275	0.041192	0.228326	0.179917	0.8343	0.0777285	-0.394097	0.1568	0.684979	0.364408
0.15	-0.0011	0.0081	3.0362	0.0240	-0.1387	0.000014	0.0192	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	0.0730893	-0.421953	0.0111	-0.113972	-0.060633
0.16	0.0001	0.0074	2.7448	0.0219	-0.1447	0.000010	0.0209	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	0.0640506	-0.423332	0.3025	0.485242	0.258148
0.17	-0.0003	0.0101	3.7647	0.0197	-0.1502	0.000008	0.0226	-0.165579	0.239119	0.188422	0.095168	0.074991	3.8163	0.082533	-0.629695	0.7174	0.285504	0.151887
0.18	-0.0007	0.0077	2.8905	0.0174	-0.1551	0.000005	0.0241	-0.365317	0.052275	0.041192	0.028589	0.022527	0.8343	0.0519202	-0.462795	0.1568	0.085766	0.045627
0.19	0.0005	0.0081	3.0362	0.0150	-0.1594	0.000003	0.0254	0.233897	0.00371	0.002923	0.228326	0.179917	0.0592	0.0457752	-0.484937	0.0111	0.684979	0.364408
0.2	-0.0011	0.0120	4.4932	0.0126	-0.1630	0.000002	0.0266	-0.565055	0.481947	0.379766	-0.037991	-0.029936	7.6919	0.0676225	-0.872943	1.4458	-0.113972	-0.060633
0.21	0.0005	0.0097	3.6190	0.0102	-0.1660	0.000001	0.0276	0.233897	0.190553	0.150153	0.228326	0.179917	3.0412	0.0402418	-0.657397	0.5717	0.684979	0.364408
0.22	-0.0011	0.0081	3.0362	0.0077	-0.1684	0.000000	0.0283	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	0.0233003	-0.512324	0.0111	-0.113972	-0.060633
0.23	-0.0007	0.0081	3.0362	0.0051	-0.1701	0.000000	0.0289	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	0.0155848	-0.51745	0.0111	0.085766	0.045627
0.24	-0.0011	0.0070	2.5991	0.0026	-0.1711	0.000000	0.0293	-0.565055	0.149407	0.11773	-0.037991	-0.029936	2.3845	0.0073547	-0.490325	0.4482	-0.113972	-0.060633
0.25	-0.0011	0.0062	2.3077	0.0000	-0.1714	0.000000	0.0294	-0.565055	0.246538	0.194268	-0.037991	-0.029936	3.9347	-4.3E-17	-0.471115	0.7396	-0.113972	-0.060633
0.26	-0.0023	0.0101	3.7647	-0.0026	-0.1711	0.000000	0.0293	-1.164268	0.239119	0.188422	-0.237729	-0.187326	3.8163	-0.010757	-0.71716	0.7174	-0.713186	-0.379414
0.27	0.0001	0.0156	5.8044	-0.0051	-0.1701	0.000000	0.0289	0.034159	0.919038	0.724187	0.161747	0.127454	1.4668	-0.038146	-1.266521	2.7571	0.485242	0.258148

0 drajad H2

0.45	-0.0023	0.0136	5.0759	-0.0389	-0.0530	-0.000059	0.0028	-1.164268	0.67621	0.532842	-0.237729	-0.187326	1.0792	-0.244271	-0.332903	2.0286	-0.713186	-0.379414
0.46	-0.0003	0.0105	3.9104	-0.0396	-0.0426	-0.000062	0.0018	-0.165579	0.287685	0.226691	0.095168	0.074991	4.5914	-0.17514	-0.188615	0.8631	0.285504	0.151887
0.47	-0.0007	0.0109	4.0561	-0.0401	-0.0321	-0.000065	0.0010	-0.365317	0.33625	0.264959	0.028589	0.022527	5.3665	-0.186952	-0.149585	1.0088	0.085766	0.045627
0.48	-0.0019	0.0085	3.1819	-0.0405	-0.0215	-0.000067	0.0005	-0.96453	0.044856	0.035346	-0.171149	-0.134863	0.7159	-0.132256	-0.07008	0.1346	-0.513448	-0.273153
0.49	0.0009	0.0074	2.7448	-0.0408	-0.0108	-0.000068	0.0001	0.433635	0.100841	0.079461	0.294906	0.232381	1.6094	-0.1193	-0.031482	0.3025	0.884717	0.470668
0.5	-0.0019	0.0085	3.1819	-0.0409	0.0000	-0.000068	0.0000	-0.96453	0.044856	0.035346	-0.171149	-0.134863	0.7159	-0.133308	6.76E-16	0.1346	-0.513448	-0.273153
0.51	-0.0011	0.0066	2.4534	-0.0408	0.0108	-0.000068	0.0001	-0.565055	0.197972	0.155999	-0.037991	-0.029936	3.1596	-0.114499	0.030215	0.5939	-0.113972	-0.060633
0.52	-0.0019	0.0070	2.5991	-0.0405	0.0215	-0.000067	0.0005	-0.96453	0.149407	0.11773	-0.171149	-0.134863	2.3845	-0.116207	0.061575	0.4482	-0.513448	-0.273153
0.53	-0.0011	0.0066	2.4534	-0.0401	0.0321	-0.000065	0.0010	-0.565055	0.197972	0.155999	-0.037991	-0.029936	3.1596	-0.112693	0.090169	0.5939	-0.113972	-0.060633
0.54	-0.0023	0.0109	4.0561	-0.0396	0.0426	-0.000062	0.0018	-1.164268	0.33625	0.264959	-0.237729	-0.187326	5.3665	-0.184344	0.198528	1.0088	-0.713186	-0.379414
0.55	-0.0023	0.0089	3.3276	-0.0389	0.0530	-0.000059	0.0028	-1.164268	0.093422	0.073615	-0.237729	-0.187326	1.4910	-0.13582	0.185103	0.2803	-0.713186	-0.379414
0.56	0.0005	0.0077	2.8905	-0.0380	0.0631	-0.000055	0.0040	0.233897	0.052275	0.041192	0.228326	0.179917	0.8343	-0.113378	0.188286	0.1568	0.684979	0.364408
0.57	-0.0003	0.0128	4.7845	-0.0370	0.0730	-0.000051	0.0053	-0.165579	0.579079	0.456304	0.095168	0.074991	9.2421	-0.215201	0.42475	1.7372	0.285504	0.151887
0.58	-0.0019	0.0117	4.3475	-0.0358	0.0826	-0.000046	0.0068	-0.96453	0.433382	0.341497	-0.171149	-0.134863	6.9167	-0.183436	0.422984	1.3001	-0.513448	-0.273153
0.59	0.0001	0.0117	4.3475	-0.0345	0.0918	-0.000041	0.0084	0.034159	0.433382	0.341497	0.161747	0.127454	6.9167	-0.176742	0.470461	1.3001	0.485242	0.258148
0.6	0.0013	0.0077	2.8905	-0.0331	0.1008	-0.000036	0.0102	0.633373	0.052275	0.041192	0.361485	0.284844	0.8343	-0.098653	0.300636	0.1568	1.084455	0.576928
0.61	0.0005	0.0074	2.7448	-0.0315	0.1093	-0.000031	0.0119	0.233897	0.100841	0.079461	0.228326	0.179917	1.6094	-0.092104	0.319594	0.3025	0.684979	0.364408
0.62	0.0009	0.0031	1.1421	-0.0298	0.1173	-0.000026	0.0138	0.433635	0.635063	0.500419	0.294906	0.232381	1.0136	-0.067849	0.267247	1.9052	0.884717	0.470668
0.63	-0.0007	0.0085	3.1819	-0.0280	0.1250	-0.000022	0.0156	-0.365317	0.044856	0.035346	0.028589	0.022527	0.7159	-0.091255	0.4076	0.1346	0.085766	0.045627
0.64	-0.0031	0.0199	7.4071	-0.0260	0.1321	-0.000018	0.0174	-1.563744	1.453261	1.145145	-0.370887	-0.292253	2.3194	-0.260632	1.321448	4.3598	-1.112662	-0.591934
0.65	0.0001	0.0066	2.4534	-0.0240	0.1387	-0.000014	0.0192	0.034159	0.197972	0.155999	0.161747	0.127454	3.1596	-0.067434	0.389303	0.5939	0.485242	0.258148
0.66	-0.0023	0.0085	3.1819	-0.0219	0.1447	-0.000010	0.0209	-1.164268	0.044856	0.035346	-0.237729	-0.187326	0.7159	-0.07143	0.472103	0.1346	-0.713186	-0.379414
0.67	-0.0015	0.0109	4.0561	-0.0197	0.1502	-0.000008	0.0226	-0.764792	0.33625	0.264959	-0.10457	-0.082399	5.3665	-0.091689	0.69955	1.0088	-0.31371	-0.166893
0.68	-0.0019	0.0093	3.4733	-0.0174	0.1551	-0.000005	0.0241	-0.96453	0.141987	0.111884	-0.171149	-0.134863	2.2661	-0.064852	0.57806	0.4260	-0.513448	-0.273153
0.69	-0.0023	0.0058	2.1620	-0.0150	0.1594	-0.000003	0.0254	-1.164268	0.295104	0.232537	-0.237729	-0.187326	4.7098	-0.040462	0.428651	0.8853	-0.713186	-0.379414
0.7	-0.0007	0.0097	3.6190	-0.0126	0.1630	-0.000002	0.0266	-0.365317	0.190553	0.150153	0.028589	0.022527	3.0412	-0.050004	0.645501	0.5717	0.085766	0.045627
0.71	-0.0027	0.0113	4.2018	-0.0102	0.1660	-0.000001	0.0276	-1.364006	0.384816	0.303228	-0.304308	-0.23979	6.1416	-0.049695	0.811819	1.1544	-0.912924	-0.485674
0.72	-0.0015	0.0058	2.1620	-0.0077	0.1684	0.000000	0.0283	-0.764792	0.295104	0.232537	-0.10457	-0.082399	4.7098	-0.020596	0.45286	0.8853	-0.31371	-0.166893
0.73	0.0001	0.0042	1.5792	-0.0051	0.1701	0.000000	0.0289	0.034159	0.489366	0.385612	0.161747	0.127454	7.8103	-0.01257	0.417351	1.4681	0.485242	0.258148
0.74	-0.0003	0.0081	3.0362	-0.0026	0.1711	0.000000	0.0293	-0.165579	0.00371	0.002923	0.095168	0.074991	0.0592	-0.007808	0.520533	0.0111	0.285504	0.151887
0.75	0.0001	0.0070	2.5991	0.0000	0.1714	0.000000	0.0294	0.034159	0.149407	0.11773	0.161747	0.127454	2.3845	2.906E-16	0.491294	0.4482	0.485242	0.258148

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0.96	0.0005	0.0105	3.9104	0.0396	0.0426	0.000062	0.0018	0.233897	0.287685	0.226691	0.228326	0.179917	4.5914	0.1751397	0.188615	0.8631	0.684979	0.364408
0.97	0.0005	0.0062	2.3077	0.0401	0.0321	0.000065	0.0010	0.233897	0.246538	0.194268	0.228326	0.179917	3.9347	0.1103302	0.088278	0.7396	0.684979	0.364408
0.98	-0.0015	0.0097	3.6190	0.0405	0.0215	0.000067	0.0005	-0.764792	0.190553	0.150153	-0.10457	-0.082399	3.0412	0.1605394	0.085066	0.5717	-0.31371	-0.166893
0.99	-0.0015	0.0066	2.4534	0.0408	0.0108	0.000068	0.0001	-0.764792	0.197972	0.155999	-0.10457	-0.082399	3.1596	0.1144988	0.030215	0.5939	-0.31371	-0.166893
1	0.0005	0.0101	3.7647	0.0409	0.0000	0.000068	0.0000	0.233897	0.239119	0.188422	0.228326	0.179917	3.8163	0.1713179	-3.02E-15	0.7174	0.684979	0.364408
1.01	-0.0007	0.0093	3.4733	0.0408	-0.0108	0.000068	0.0001	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	0.1520122	-0.040114	0.4260	0.085766	0.045627
1.02	-0.0052	0.0144	5.3673	0.0405	-0.0215	0.000067	0.0005	-2.562434	0.773341	0.60938	-0.703784	-0.55457	1.2342	0.2736714	-0.145012	2.3200	-2.111352	-1.123235
1.03	-0.0019	0.0093	3.4733	0.0401	-0.0321	0.000065	0.0010	-0.96453	0.141987	0.111884	-0.171149	-0.134863	2.2661	0.1496148	-0.119711	0.4260	-0.513448	-0.273153
1.04	-0.0007	0.0066	2.4534	0.0396	-0.0426	0.000062	0.0018	-0.365317	0.197972	0.155999	0.028589	0.022527	3.1596	0.1111209	-0.119671	0.5939	0.085766	0.045627
1.05	-0.0015	0.0081	3.0362	0.0389	-0.0530	0.000059	0.0028	-0.764792	0.00371	0.002923	-0.10457	-0.082399	0.0592	0.118261	-0.161172	0.0111	-0.31371	-0.166893
1.06	-0.0003	0.0097	3.6190	0.0380	-0.0631	0.000055	0.0040	-0.165579	0.190553	0.150153	0.095168	0.074991	3.0412	0.1504521	-0.249854	0.5717	0.285504	0.151887
1.07	-0.0015	0.0085	3.1819	0.0370	-0.0730	0.000051	0.0053	-0.764792	0.044856	0.035346	-0.10457	-0.082399	0.7159	0.1206202	-0.238073	0.1346	-0.31371	-0.166893
1.08	0.0001	0.0085	3.1819	0.0358	-0.0826	0.000046	0.0068	0.034159	0.044856	0.035346	0.161747	0.127454	0.7159	0.1168183	-0.269371	0.1346	0.485242	0.258148
1.09	0.0005	0.0097	3.6190	0.0345	-0.0918	0.000041	0.0084	0.233897	0.190553	0.150153	0.228326	0.179917	3.0412	0.1366252	-0.363676	0.5717	0.684979	0.364408
1.1	-0.0003	0.0081	3.0362	0.0331	-0.1008	0.000036	0.0102	-0.165579	0.00371	0.002923	0.095168	0.074991	0.0592	0.1005989	-0.306567	0.0111	0.285504	0.151887
1.11	-0.0011	0.0074	2.7448	0.0315	-0.1093	0.000031	0.0119	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	0.0921041	-0.319594	0.3025	-0.113972	-0.060633
1.12	-0.0015	0.0070	2.5991	0.0298	-0.1173	0.000026	0.0138	-0.764792	0.149407	0.11773	-0.10457	-0.082399	2.3845	0.0853846	-0.336314	0.4482	-0.31371	-0.166893
1.13	-0.0015	0.0077	2.8905	0.0280	-0.1250	0.000022	0.0156	-0.764792	0.052275	0.041192	-0.10457	-0.082399	0.8343	0.0834747	-0.372848	0.1568	-0.31371	-0.166893
1.14	0.0001	0.0074	2.7448	0.0260	-0.1321	0.000018	0.0174	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	0.0761952	-0.386323	0.3025	0.485242	0.258148
1.15	0.0005	0.0081	3.0362	0.0240	-0.1387	0.000014	0.0192	0.233897	0.00371	0.002923	0.228326	0.179917	0.0592	0.0730893	-0.421953	0.0111	0.684979	0.364408
1.16	-0.0031	0.0077	2.8905	0.0219	-0.1447	0.000010	0.0209	-1.563744	0.052275	0.041192	-0.370887	-0.292253	0.8343	0.0653396	-0.431851	0.1568	-1.112662	-0.591934
1.17	0.0009	0.0097	3.6190	0.0197	-0.1502	0.000008	0.0226	0.433635	0.190553	0.150153	0.294906	0.232381	3.0412	0.0779551	-0.594767	0.5717	0.884717	0.470668
1.18	-0.0015	0.0081	3.0362	0.0174	-0.1551	0.000005	0.0241	-0.764792	0.00371	0.002923	-0.10457	-0.082399	0.0592	0.0529444	-0.471924	0.0111	-0.31371	-0.166893
1.19	0.0005	0.0062	2.3077	0.0150	-0.1594	0.000003	0.0254	0.233897	0.246538	0.194268	0.228326	0.179917	3.9347	0.0413476	-0.438032	0.7396	0.684979	0.364408
1.2	-0.0007	0.0070	2.5991	0.0126	-0.1630	0.000002	0.0266	-0.365317	0.149407	0.11773	0.028589	0.022527	2.3845	0.0361954	-0.467248	0.4482	0.085766	0.045627
1.21	0.0013	0.0074	2.7448	0.0102	-0.1660	0.000001	0.0276	0.633373	0.100841	0.079461	0.361485	0.284844	1.6094	0.0297274	-0.485632	0.3025	1.084455	0.576928
1.22	-0.0007	0.0093	3.4733	0.0077	-0.1684	0.000000	0.0283	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	0.0285406	-0.627546	0.4260	0.085766	0.045627
1.23	-0.0011	0.0066	2.4534	0.0051	-0.1701	0.000000	0.0289	-0.565055	0.197972	0.155999	-0.037991	-0.029936	3.1596	0.0143789	-0.47741	0.5939	-0.113972	-0.060633
1.24	-0.0019	0.0070	2.5991	0.0026	-0.1711	0.000000	0.0293	-0.96453	0.149407	0.11773	-0.171149	-0.134863	2.3845	0.0073547	-0.490325	0.4482	-0.513448	-0.273153
1.25	-0.0015	0.0042	1.5792	0.0000	-0.1714	0.000000	0.0294	-0.764792	0.489366	0.385612	-0.10457	-0.082399	7.8103	-5.04E-16	-0.420668	1.4681	-0.31371	-0.166893
1.26	-0.0003	0.0120	4.4932	-0.0026	-0.1711	0.000000	0.0293	-0.165579	0.481947	0.379766	0.095168	0.074991	7.6919	-0.013741	-0.916056	1.4458	0.285504	0.151887
1.27	-0.0015	0.0074	2.7448	-0.0051	-0.1701	0.000000	0.0289	-0.764792	0.100841	0.079461	-0.10457	-0.082399	1.6094	-0.014982	-0.49743	0.3025	-0.31371	-0.166893

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1.47	-0.0015	0.0097	3.6190	-0.0401	-0.0321	-0.000065	0.0010	-0.764792	0.190553	0.150153	-0.10457	-0.082399	3.0412	-0.158949	-0.127179	0.5717	-0.31371	-0.166893
1.48	-0.0011	0.0097	3.6190	-0.0405	-0.0215	-0.000067	0.0005	-0.565055	0.190553	0.150153	-0.037991	-0.029936	3.0412	-0.160539	-0.085066	0.5717	-0.113972	-0.060633
1.49	0.0005	0.0117	4.3475	-0.0408	-0.0108	-0.000068	0.0001	0.233897	0.433382	0.341497	0.228326	0.179917	6.9167	-0.208915	-0.055131	1.3001	0.684979	0.364408
1.5	0.0005	0.0077	2.8905	-0.0409	0.0000	-0.000068	0.0000	0.233897	0.052275	0.041192	0.228326	0.179917	0.8343	-0.121942	3.45E-15	0.1568	0.684979	0.364408
1.51	-0.0003	0.0105	3.9104	-0.0408	0.0108	-0.000068	0.0001	-0.165579	0.287685	0.226691	0.095168	0.074991	4.5914	-0.180464	0.047623	0.8631	0.285504	0.151887
1.52	-0.0011	0.0101	3.7647	-0.0405	0.0215	-0.000067	0.0005	-0.565055	0.239119	0.188422	-0.037991	-0.029936	3.8163	-0.169967	0.090062	0.7174	-0.113972	-0.060633
1.53	-0.0015	0.0136	5.0759	-0.0401	0.0321	-0.000065	0.0010	-0.764792	0.67621	0.532842	-0.10457	-0.082399	1.0792	-0.252292	0.201866	2.0286	-0.31371	-0.166893
1.54	0.0001	0.0074	2.7448	-0.0396	0.0426	-0.000062	0.0018	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	-0.115781	0.124689	0.3025	0.485242	0.258148
1.55	0.0005	0.0128	4.7845	-0.0389	0.0530	-0.000059	0.0028	0.233897	0.579079	0.456304	0.228326	0.179917	9.2421	-0.226196	0.30827	1.7372	0.684979	0.364408
1.56	-0.0019	0.0077	2.8905	-0.0380	0.0631	-0.000055	0.0040	-0.96453	0.052275	0.041192	-0.171149	-0.134863	0.8343	-0.113378	0.188286	0.1568	-0.513448	-0.273153
1.57	-0.0007	0.0062	2.3077	-0.0370	0.0730	-0.000051	0.0053	-0.365317	0.246538	0.194268	0.028589	0.022527	3.9347	-0.10163	0.200591	0.7396	0.085766	0.045627
1.58	0.0001	0.0077	2.8905	-0.0358	0.0826	-0.000046	0.0068	0.034159	0.052275	0.041192	0.161747	0.127454	0.8343	-0.106858	0.246404	0.1568	0.485242	0.258148
1.59	-0.0011	0.0089	3.3276	-0.0345	0.0918	-0.000041	0.0084	-0.565055	0.093422	0.073615	-0.037991	-0.029936	1.4910	-0.120579	0.320963	0.2803	-0.113972	-0.060633
1.6	-0.0027	0.0077	2.8905	-0.0331	0.1008	-0.000036	0.0102	-1.364006	0.052275	0.041192	-0.304308	-0.23979	0.8343	-0.098653	0.300636	0.1568	-0.912924	-0.485674
1.61	-0.0011	0.0066	2.4534	-0.0315	0.1093	-0.000031	0.0119	-0.565055	0.197972	0.155999	-0.037991	-0.029936	3.1596	-0.088397	0.306731	0.5939	-0.113972	-0.060633
1.62	-0.0015	0.0054	2.0163	-0.0298	0.1173	-0.000026	0.0138	-0.764792	0.343669	0.270806	-0.10457	-0.082399	5.4849	-0.078371	0.308687	1.0310	-0.31371	-0.166893
1.63	-0.0007	0.0081	3.0362	-0.0280	0.1250	-0.000022	0.0156	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	-0.085121	0.380203	0.0111	0.085766	0.045627
1.64	-0.0011	0.0074	2.7448	-0.0260	0.1321	-0.000018	0.0174	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	-0.076195	0.386323	0.3025	-0.113972	-0.060633
1.65	-0.0011	0.0089	3.3276	-0.0240	0.1387	-0.000014	0.0192	-0.565055	0.093422	0.073615	-0.037991	-0.029936	1.4910	-0.083942	0.484605	0.2803	-0.113972	-0.060633
1.66	0.0009	0.0081	3.0362	-0.0219	0.1447	-0.000010	0.0209	0.433635	0.00371	0.002923	0.294906	0.232381	0.0592	-0.066628	0.44037	0.0111	0.884717	0.470668
1.67	-0.0027	0.0109	4.0561	-0.0197	0.1502	-0.000008	0.0226	-1.364006	0.33625	0.264959	-0.304308	-0.23979	5.3665	-0.091689	0.69955	1.0088	-0.912924	-0.485674
1.68	-0.0023	0.0093	3.4733	-0.0174	0.1551	-0.000005	0.0241	-1.164268	0.141987	0.111884	-0.237729	-0.187326	2.2661	-0.064852	0.57806	0.4260	-0.713186	-0.379414
1.69	0.0005	0.0031	1.1421	-0.0150	0.1594	-0.000003	0.0254	0.233897	0.635063	0.500419	0.228326	0.179917	1.0136	-0.034264	0.362984	1.9052	0.684979	0.364408
1.7	-0.0007	0.0093	3.4733	-0.0126	0.1630	-0.000002	0.0266	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	-0.047067	0.607594	0.4260	0.085766	0.045627
1.71	-0.0011	0.0027	0.9964	-0.0102	0.1660	-0.000001	0.0276	-0.565055	0.683629	0.538688	-0.037991	-0.029936	1.0911	-0.022549	0.368361	2.0509	-0.113972	-0.060633
1.72	-0.0003	0.0093	3.4733	-0.0077	0.1684	0.000000	0.0283	-0.165579	0.141987	0.111884	0.095168	0.074991	2.2661	-0.028541	0.627546	0.4260	0.285504	0.151887
1.73	-0.0003	0.0066	2.4534	-0.0051	0.1701	0.000000	0.0289	-0.165579	0.197972	0.155999	0.095168	0.074991	3.1596	-0.014379	0.47741	0.5939	0.285504	0.151887
1.74	-0.0003	0.0077	2.8905	-0.0026	0.1711	0.000000	0.0293	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	-0.007657	0.510464	0.1568	0.285504	0.151887
1.75	-0.0019	0.0097	3.6190	0.0000	0.1714	0.000000	0.0294	-0.96453	0.190553	0.150153	-0.171149	-0.134863	3.0412	1.368E-15	0.67872	0.5717	-0.513448	-0.273153
1.76	-0.0031	0.0105	3.9104	0.0026	0.1711	0.000000	0.0293	-1.563744	0.287685	0.226691	-0.370887	-0.292253	4.5914	0.0113538	0.756939	0.8631	-1.112662	-0.591934
1.77	0.0009	0.0054	2.0163	0.0051	0.1701	0.000000	0.0289	0.433635	0.343669	0.270806	0.294906	0.232381	5.4849	0.0134744	0.44738	1.0310	0.884717	0.470668
1.78	-0.0003	0.0128	4.7845	0.0077	0.1684	0.000000	0.0283	-0.165579	0.579079	0.456304	0.095168	0.074991	9.2421	0.044566	0.979913	1.7372	0.285504	0.151887
1.79	-0.0003	0.0074	2.7448	0.0102	0.1660	0.000001	0.0276	-0.165579	0.100841	0.079461	0.095168	0.074991	1.6094	0.0297274	0.485632	0.3025	0.285504	0.151887
1.8	-0.0003	0.0077	2.8905	0.0126	0.1630	0.000002	0.0266	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	0.037682	0.48644	0.1568	0.285504	0.151887

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1.98	0.0005	0.0128	4.7845	0.0405	0.0215	0.000067	0.0005	0.233897	0.579079	0.456304	0.228326	0.179917	9.2421	0.2359607	0.12503	1.7372	0.684979	0.364408
1.99	-0.0003	0.0062	2.3077	0.0408	0.0108	0.000068	0.0001	-0.165579	0.246538	0.194268	0.095168	0.074991	3.9347	0.1120981	0.029582	0.7396	0.285504	0.151887
2	0.0005	0.0097	3.6190	0.0409	0.0000	0.000068	0.0000	0.233897	0.190553	0.150153	0.228326	0.179917	3.0412	0.1618153	-5.7E-15	0.5717	0.684979	0.364408
2.01	-0.0011	0.0011	0.4136	0.0408	-0.0108	0.000068	0.0001	-0.565055	0.877892	0.691764	-0.037991	-0.029936	1.4011	0.0808888	-0.021346	2.6337	-0.113972	-0.060633
2.02	-0.0007	0.0070	2.5991	0.0405	-0.0215	0.000067	0.0005	-0.365317	0.149407	0.11773	0.028589	0.022527	2.3845	0.116207	-0.061575	0.4482	0.085766	0.045627
2.03	0.0001	0.0105	3.9104	0.0401	-0.0321	0.000065	0.0010	0.034159	0.287685	0.226691	0.161747	0.127454	4.5914	0.1776177	-0.142117	0.8631	0.485242	0.258148
2.04	0.0005	0.0035	1.2878	0.0396	-0.0426	0.000062	0.0018	0.233897	0.586498	0.46215	0.228326	0.179917	9.3605	0.0924817	-0.099597	1.7595	0.684979	0.364408
2.05	-0.0007	0.0105	3.9104	0.0389	-0.0530	0.000059	0.0028	-0.365317	0.287685	0.226691	0.028589	0.022527	4.5914	0.1719705	-0.23437	0.8631	0.085766	0.045627
2.06	0.0001	0.0089	3.3276	0.0380	-0.0631	0.000055	0.0040	0.034159	0.093422	0.073615	0.161747	0.127454	1.4910	0.1327815	-0.220508	0.2803	0.485242	0.258148
2.07	-0.0015	0.0011	0.4136	0.0370	-0.0730	0.000051	0.0053	-0.764792	0.877892	0.691764	-0.10457	-0.082399	1.4011	0.0733351	-0.144744	2.6337	-0.31371	-0.166893
2.08	-0.0011	0.0097	3.6190	0.0358	-0.0826	0.000046	0.0068	-0.565055	0.190553	0.150153	-0.037991	-0.029936	3.0412	0.1417998	-0.326976	0.5717	-0.113972	-0.060633
2.09	-0.0007	0.0097	3.6190	0.0345	-0.0918	0.000041	0.0084	-0.365317	0.190553	0.150153	0.028589	0.022527	3.0412	0.1366252	-0.363676	0.5717	0.085766	0.045627
2.1	-0.0003	0.0113	4.2018	0.0331	-0.1008	0.000036	0.0102	-0.165579	0.384816	0.303228	0.095168	0.074991	6.1416	0.1616624	-0.492653	1.1544	0.285504	0.151887
2.11	0.0001	0.0093	3.4733	0.0315	-0.1093	0.000031	0.0119	0.034159	0.141987	0.111884	0.161747	0.127454	2.2661	0.117359	-0.407226	0.4260	0.485242	0.258148
2.12	-0.0019	0.0156	5.8044	0.0298	-0.1173	0.000026	0.0138	-0.96453	0.919038	0.724187	-0.171149	-0.134863	1.4668	0.2218647	-0.873884	2.7571	-0.513448	-0.273153
2.13	-0.0007	0.0074	2.7448	0.0280	-0.1250	0.000022	0.0156	-0.365317	0.100841	0.079461	0.028589	0.022527	1.6094	0.0818281	-0.365493	0.3025	0.085766	0.045627
2.14	-0.0015	0.0089	3.3276	0.0260	-0.1321	0.000018	0.0174	-0.764792	0.093422	0.073615	-0.10457	-0.082399	1.4910	0.0910306	-0.461541	0.2803	-0.31371	-0.166893
2.15	-0.0007	0.0085	3.1819	0.0240	-0.1387	0.000014	0.0192	-0.365317	0.044856	0.035346	0.028589	0.022527	0.7159	0.0783562	-0.452359	0.1346	0.085766	0.045627
2.16	-0.0003	0.0105	3.9104	0.0219	-0.1447	0.000010	0.0209	-0.165579	0.287685	0.226691	0.095168	0.074991	4.5914	0.0968885	-0.640368	0.8631	0.285504	0.151887
2.17	-0.0003	0.0066	2.4534	0.0197	-0.1502	0.000008	0.0226	-0.165579	0.197972	0.155999	0.095168	0.074991	3.1596	0.0552693	-0.421683	0.5939	0.285504	0.151887
2.18	-0.0007	0.0089	3.3276	0.0174	-0.1551	0.000005	0.0241	-0.365317	0.093422	0.073615	0.028589	0.022527	1.4910	0.0608056	-0.541995	0.2803	0.085766	0.045627
2.19	-0.0019	0.0058	2.1620	0.0150	-0.1594	0.000003	0.0254	-0.96453	0.295104	0.232537	-0.171149	-0.134863	4.7098	0.0404621	-0.428651	0.8853	-0.513448	-0.273153
2.2	-0.0019	0.0109	4.0561	0.0126	-0.1630	0.000002	0.0266	-0.96453	0.33625	0.264959	-0.171149	-0.134863	5.3665	0.0588131	-0.759222	1.0088	-0.513448	-0.273153
2.21	-0.0007	0.0093	3.4733	0.0102	-0.1660	0.000001	0.0276	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	0.0378786	-0.618791	0.4260	0.085766	0.045627
2.22	0.0001	0.0062	2.3077	0.0077	-0.1684	0.000000	0.0283	0.034159	0.246538	0.194268	0.161747	0.127454	3.9347	0.0210466	-0.46277	0.7396	0.485242	0.258148
2.23	0.0009	0.0085	3.1819	0.0051	-0.1701	0.000000	0.0289	0.433635	0.044856	0.035346	0.294906	0.232381	0.7159	0.0167079	-0.554738	0.1346	0.884717	0.470668
2.24	-0.0011	0.0081	3.0362	0.0026	-0.1711	0.000000	0.0293	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	0.0078078	-0.520533	0.0111	-0.113972	-0.060633
2.25	-0.0011	0.0062	2.3077	0.0000	-0.1714	0.000000	0.0294	-0.565055	0.246538	0.194268	-0.037991	-0.029936	3.9347	2.855E-15	-0.471115	0.7396	-0.113972	-0.060633
2.26	-0.0007	0.0093	3.4733	-0.0026	-0.1711	0.000000	0.0293	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	-0.009564	-0.637602	0.4260	0.085766	0.045627
2.27	0.0001	0.0027	0.9964	-0.0051	-0.1701	0.000000	0.0289	0.034159	0.683629	0.538688	0.161747	0.127454	1.0911	-0.011364	-0.377311	2.0509	0.485242	0.258148
2.28	-0.0003	0.0066	2.4534	-0.0077	-0.1684	0.000000	0.0283	-0.165579	0.197972	0.155999	0.095168	0.074991	3.1596	-0.021497	-0.472681	0.5939	0.285504	0.151887
2.29	-0.0007	0.0101	3.7647	-0.0102	-0.1660	-0.000001	0.0276	-0.365317	0.239119	0.188422	0.028589	0.022527	3.8163	-0.042605	-0.696002	0.7174	0.085766	0.045627
2.3	-0.0011	0.0089	3.3276	-0.0126	-0.1630	-0.000002	0.0266	-0.565055	0.093422	0.073615	-0.037991	-0.029936	1.4910	-0.044131	-0.569687	0.2803	-0.113972	-0.060633
2.31	-0.0019	0.0070	2.5991	-0.0150	-0.1594	-0.000003	0.0254	-0.96453	0.149407	0.11773	-0.171149	-0.134863	2.3845	-0.043119	-0.456794	0.4482	-0.513448	-0.273153

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7.59	0.0009	0.0117	4.3475	-0.0345	0.0918	-0.000041	0.0084	0.433635	0.433382	0.341497	0.294906	0.232381	6.9167	-0.176742	0.470461	1.3001	0.884717	0.470668
7.6	0.0009	0.0062	2.3077	-0.0331	0.1008	-0.000036	0.0102	0.433635	0.246538	0.194268	0.294906	0.232381	3.9347	-0.090869	0.276915	0.7396	0.884717	0.470668
7.61	-0.0027	0.0117	4.3475	-0.0315	0.1093	-0.000031	0.0119	-1.364006	0.433382	0.341497	-0.304308	-0.23979	6.9167	-0.16129	0.559664	1.3001	-0.912924	-0.485674
7.62	0.0001	0.0054	2.0163	-0.0298	0.1173	-0.000026	0.0138	0.034159	0.343669	0.270806	0.161747	0.127454	5.4849	-0.078371	0.308687	1.0310	0.485242	0.258148
7.63	-0.0011	0.0081	3.0362	-0.0280	0.1250	-0.000022	0.0156	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	-0.085121	0.380203	0.0111	-0.113972	-0.060633
7.64	-0.0003	0.0054	2.0163	-0.0260	0.1321	-0.000018	0.0174	-0.165579	0.343669	0.270806	0.095168	0.074991	5.4849	-0.068529	0.347452	1.0310	0.285504	0.151887
7.65	-0.0003	0.0089	3.3276	-0.0240	0.1387	-0.000014	0.0192	-0.165579	0.093422	0.073615	0.095168	0.074991	1.4910	-0.083942	0.484605	0.2803	0.285504	0.151887
7.66	-0.0007	0.0066	2.4534	-0.0219	0.1447	-0.000010	0.0209	-0.365317	0.197972	0.155999	0.028589	0.022527	3.1596	-0.061473	0.406294	0.5939	0.085766	0.045627
7.67	0.0001	0.0081	3.0362	-0.0197	0.1502	-0.000008	0.0226	0.034159	0.00371	0.002923	0.161747	0.127454	0.0592	-0.059905	0.457049	0.0111	0.485242	0.258148
7.68	0.0001	0.0081	3.0362	-0.0174	0.1551	-0.000005	0.0241	0.034159	0.00371	0.002923	0.161747	0.127454	0.0592	-0.052944	0.471924	0.0111	0.485242	0.258148
7.69	-0.0011	0.0105	3.9104	-0.0150	0.1594	-0.000003	0.0254	-0.565055	0.287685	0.226691	-0.037991	-0.029936	4.5914	-0.066564	0.705176	0.8631	-0.113972	-0.060633
7.7	0.0001	0.0058	2.1620	-0.0126	0.1630	-0.000002	0.0266	0.034159	0.295104	0.232537	0.161747	0.127454	4.7098	-0.033965	0.438461	0.8853	0.485242	0.258148
7.71	-0.0023	0.0097	3.6190	-0.0102	0.1660	-0.000001	0.0276	-1.164268	0.190553	0.150153	-0.237729	-0.187326	3.0412	-0.040242	0.657397	0.5717	-0.713186	-0.379414
7.72	0.0001	0.0085	3.1819	-0.0077	0.1684	0.000000	0.0283	0.034159	0.044856	0.035346	0.161747	0.127454	0.7159	-0.024979	0.549243	0.1346	0.485242	0.258148
7.73	0.0005	0.0097	3.6190	-0.0051	0.1701	0.000000	0.0289	0.233897	0.190553	0.150153	0.228326	0.179917	3.0412	-0.020281	0.673368	0.5717	0.684979	0.364408
7.74	-0.0007	0.0077	2.8905	-0.0026	0.1711	0.000000	0.0293	-0.365317	0.052275	0.041192	0.028589	0.022527	0.8343	-0.007657	0.510464	0.1568	0.085766	0.045627
7.75	-0.0035	0.0093	3.4733	0.0000	0.1714	0.000000	0.0294	-1.763482	0.141987	0.111884	-0.437467	-0.344716	2.2661	-1.16E-13	0.638862	0.4260	-1.3124	-0.698194
7.76	-0.0007	0.0050	1.8706	0.0026	0.1711	0.000000	0.0293	-0.365317	0.392235	0.309075	0.028589	0.022527	6.2600	0.0065995	0.439977	1.1767	0.085766	0.045627
7.77	-0.0015	0.0101	3.7647	0.0051	0.1701	0.000000	0.0289	-0.764792	0.239119	0.188422	-0.10457	-0.082399	3.8163	0.0214718	0.712912	0.7174	-0.31371	-0.166893
7.78	-0.0015	0.0109	4.0561	0.0077	0.1684	0.000000	0.0283	-0.764792	0.33625	0.264959	-0.10457	-0.082399	5.3665	0.035663	0.784153	1.0088	-0.31371	-0.166893
7.79	-0.0003	0.0077	2.8905	0.0102	0.1660	0.000001	0.0276	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	0.0303256	0.495404	0.1568	0.285504	0.151887
7.8	-0.0023	0.0050	1.8706	0.0126	0.1630	0.000002	0.0266	-1.164268	0.392235	0.309075	-0.237729	-0.187326	6.2600	0.0324787	0.41927	1.1767	-0.713186	-0.379414
7.81	-0.0003	0.0074	2.7448	0.0150	0.1594	0.000003	0.0254	-0.165579	0.100841	0.079461	0.095168	0.074991	1.6094	0.0440042	0.466175	0.3025	0.285504	0.151887
7.82	-0.0011	0.0074	2.7448	0.0174	0.1551	0.000005	0.0241	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	0.050896	0.453665	0.3025	-0.113972	-0.060633
7.83	-0.0035	0.0124	4.6388	0.0197	0.1502	0.000008	0.0226	-1.763482	0.530513	0.418035	-0.437467	-0.344716	8.4670	0.1100005	0.839261	1.5915	-1.3124	-0.698194
7.84	-0.0003	0.0113	4.2018	0.0219	0.1447	0.000010	0.0209	-0.165579	0.384816	0.303228	0.095168	0.074991	6.1416	0.107072	0.707675	1.1544	0.285504	0.151887
7.85	-0.0007	0.0089	3.3276	0.0240	0.1387	0.000014	0.0192	-0.365317	0.093422	0.073615	0.028589	0.022527	1.4910	0.0839417	0.484605	0.2803	0.085766	0.045627
7.86	0.0001	0.0117	4.3475	0.0260	0.1321	0.000018	0.0174	0.034159	0.433382	0.341497	0.161747	0.127454	6.9167	0.1334309	0.676518	1.3001	0.485242	0.258148
7.87	-0.0011	0.0081	3.0362	0.0280	0.1250	0.000022	0.0156	-0.565055	0.00371	0.002923	-0.037991	-0.029936	0.0592	0.0851214	0.380203	0.0111	-0.113972	-0.060633
7.88	-0.0031	0.0132	4.9302	0.0298	0.1173	0.000026	0.0138	-1.563744	0.627644	0.494573	-0.370887	-0.292253	10.0172	0.1803021	0.710177	1.8829	-1.112662	-0.591934
7.89	-0.0019	0.0035	1.2878	0.0315	0.1093	0.000031	0.0119	-0.96453	0.586498	0.46215	-0.171149	-0.134863	9.3605	0.0735697	0.255281	1.7595	-0.513448	-0.273153
7.9	-0.0023	0.0124	4.6388	0.0331	0.1008	0.000036	0.0102	-1.164268	0.530513	0.418035	-0.237729	-0.187326	8.4670	0.1847257	0.562936	1.5915	-0.713186	-0.379414
7.91	-0.0015	0.0066	2.4534	0.0345	0.0918	0.000041	0.0084	-0.764792	0.197972	0.155999	-0.10457	-0.082399	3.1596	0.0968657	0.257842	0.5939	-0.31371	-0.166893
7.92	-0.0007	0.0081	3.0362	0.0358	0.0826	0.000046	0.0068	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	0.1089661	0.251265	0.0111	0.085766	0.045627

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8.1	-0.0011	0.0046	1.7249	0.0331	-0.1008	0.000036	0.0102	-0.565055	0.440801	0.347343	-0.037991	-0.029936	7.0352	0.0830843	-0.253193	1.3224	-0.113972	-0.060633
8.11	0.0021	0.0105	3.9104	0.0315	-0.1093	0.000031	0.0119	1.032849	0.287685	0.226691	0.494644	0.389771	4.5914	0.1393246	-0.483445	0.8631	1.483931	0.789449
8.12	-0.0015	0.0046	1.7249	0.0298	-0.1173	0.000026	0.0138	-0.764792	0.440801	0.347343	-0.10457	-0.082399	7.0352	0.0748635	-0.294874	1.3224	-0.31371	-0.166893
8.13	-0.0007	0.0097	3.6190	0.0280	-0.1250	0.000022	0.0156	-0.365317	0.190553	0.150153	0.028589	0.022527	3.0412	0.1107702	-0.494766	0.5717	0.085766	0.045627
8.14	-0.0007	0.0093	3.4733	0.0260	-0.1321	0.000018	0.0174	-0.365317	0.141987	0.111884	0.028589	0.022527	2.2661	0.0970878	-0.492252	0.4260	0.085766	0.045627
8.15	-0.0011	0.0074	2.7448	0.0240	-0.1387	0.000014	0.0192	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	0.0702616	-0.405628	0.3025	-0.113972	-0.060633
8.16	-0.0003	0.0058	2.1620	0.0219	-0.1447	0.000010	0.0209	-0.165579	0.295104	0.232537	0.095168	0.074991	4.7098	0.058895	-0.389257	0.8853	0.285504	0.151887
8.17	0.0001	0.0101	3.7647	0.0197	-0.1502	0.000008	0.0226	0.034159	0.239119	0.188422	0.161747	0.127454	3.8163	0.082533	-0.629695	0.7174	0.485242	0.258148
8.18	0.0001	0.0081	3.0362	0.0174	-0.1551	0.000005	0.0241	0.034159	0.00371	0.002923	0.161747	0.127454	0.0592	0.0529444	-0.471924	0.0111	0.485242	0.258148
8.19	-0.0019	0.0105	3.9104	0.0150	-0.1594	0.000003	0.0254	-0.96453	0.287685	0.226691	-0.171149	-0.134863	4.5914	0.0665645	-0.705176	0.8631	-0.513448	-0.273153
8.2	-0.0031	0.0070	2.5991	0.0126	-0.1630	0.000002	0.0266	-1.563744	0.149407	0.11773	-0.370887	-0.292253	2.3845	0.0361954	-0.467248	0.4482	-1.112662	-0.591934
8.21	0.0001	0.0105	3.9104	0.0102	-0.1660	0.000001	0.0276	0.034159	0.287685	0.226691	0.161747	0.127454	4.5914	0.0449682	-0.734608	0.8631	0.485242	0.258148
8.22	-0.0003	0.0074	2.7448	0.0077	-0.1684	0.000000	0.0283	-0.165579	0.100841	0.079461	0.095168	0.074991	1.6094	0.0223988	-0.492503	0.3025	0.285504	0.151887
8.23	-0.0019	0.0089	3.3276	0.0051	-0.1701	0.000000	0.0289	-0.96453	0.093422	0.073615	-0.171149	-0.134863	1.4910	0.0178989	-0.594281	0.2803	-0.513448	-0.273153
8.24	0.0001	0.0163	6.0958	0.0026	-0.1711	0.000000	0.0293	0.034159	1.01617	0.800724	0.161747	0.127454	1.6218	0.0203039	-1.353626	3.0485	0.485242	0.258148
8.25	0.0005	0.0105	3.9104	0.0000	-0.1714	0.000000	0.0294	0.233897	0.287685	0.226691	0.228326	0.179917	4.5914	1.491E-13	-0.758436	0.8631	0.684979	0.364408
8.26	0.0005	0.0081	3.0362	-0.0026	-0.1711	0.000000	0.0293	0.233897	0.00371	0.002923	0.228326	0.179917	0.0592	-0.007808	-0.520533	0.0111	0.684979	0.364408
8.27	-0.0015	0.0054	2.0163	-0.0051	-0.1701	0.000000	0.0289	-0.764792	0.343669	0.270806	-0.10457	-0.082399	5.4849	-0.013474	-0.44738	1.0310	-0.31371	-0.166893
8.28	-0.0015	0.0093	3.4733	-0.0077	-0.1684	0.000000	0.0283	-0.764792	0.141987	0.111884	-0.10457	-0.082399	2.2661	-0.028541	-0.627546	0.4260	-0.31371	-0.166893
8.29	-0.0011	0.0058	2.1620	-0.0102	-0.1660	-0.000001	0.0276	-0.565055	0.295104	0.232537	-0.037991	-0.029936	4.7098	-0.027335	-0.446542	0.8853	-0.113972	-0.060633
8.3	0.0001	0.0066	2.4534	-0.0126	-0.1630	-0.000002	0.0266	0.034159	0.197972	0.155999	0.161747	0.127454	3.1596	-0.035452	-0.457653	0.5939	0.485242	0.258148
8.31	-0.0015	0.0058	2.1620	-0.0150	-0.1594	-0.000003	0.0254	-0.764792	0.295104	0.232537	-0.10457	-0.082399	4.7098	-0.040462	-0.428651	0.8853	-0.31371	-0.166893
8.32	-0.0015	0.0105	3.9104	-0.0174	-0.1551	-0.000005	0.0241	-0.764792	0.287685	0.226691	-0.10457	-0.082399	4.5914	-0.07699	-0.686253	0.8631	-0.31371	-0.166893
8.33	-0.0011	0.0074	2.7448	-0.0197	-0.1502	-0.000008	0.0226	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	-0.057587	-0.439366	0.3025	-0.113972	-0.060633
8.34	-0.0007	0.0081	3.0362	-0.0219	-0.1447	-0.000010	0.0209	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	-0.066628	-0.44037	0.0111	0.085766	0.045627
8.35	-0.0035	0.0058	2.1620	-0.0240	-0.1387	-0.000014	0.0192	-1.763482	0.295104	0.232537	-0.437467	-0.344716	4.7098	-0.064606	-0.372978	0.8853	-1.3124	-0.698194
8.36	0.0001	0.0074	2.7448	-0.0260	-0.1321	-0.000018	0.0174	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	-0.076195	-0.386323	0.3025	0.485242	0.258148
8.37	0.0005	0.0093	3.4733	-0.0280	-0.1250	-0.000022	0.0156	0.233897	0.141987	0.111884	0.228326	0.179917	2.2661	-0.104265	-0.46571	0.4260	0.684979	0.364408
8.38	-0.0039	0.0089	3.3276	-0.0298	-0.1173	-0.000026	0.0138	-1.96322	0.093422	0.073615	-0.504046	-0.39718	1.4910	-0.104104	-0.410047	0.2803	-1.512138	-0.804454
8.39	0.0013	0.0066	2.4534	-0.0315	-0.1093	-0.000031	0.0119	0.633373	0.197972	0.155999	0.361485	0.284844	3.1596	-0.088397	-0.306731	0.5939	1.084455	0.576928
8.4	-0.0003	0.0058	2.1620	-0.0331	-0.1008	-0.000036	0.0102	-0.165579	0.295104	0.232537	0.095168	0.074991	4.7098	-0.088922	-0.270984	0.8853	0.285504	0.151887
8.41	-0.0015	0.0089	3.3276	-0.0345	-0.0918	-0.000041	0.0084	-0.764792	0.093422	0.073615	-0.10457	-0.082399	1.4910	-0.120579	-0.320963	0.2803	-0.31371	-0.166893
8.42	-0.0003	0.0058	2.1620	-0.0358	-0.0826	-0.000046	0.0068	-0.165579	0.295104	0.232537	0.095168	0.074991	4.7098	-0.096319	-0.222101	0.8853	0.285504	0.151887
8.43	0.0005	0.0093	3.4733	-0.0370	-0.0730	-0.000051	0.0053	0.233897	0.141987	0.111884	0.228326	0.179917	2.2661	-0.137817	-0.272014	0.4260	0.684979	0.364408

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8.61	-0.0003	0.0124	4.6388	-0.0315	0.1093	-0.000031	0.0119	-0.165579	0.530513	0.418035	0.095168	0.074991	8.4670	-0.175934	0.610477	1.5915	0.285504	0.151887
8.62	-0.0003	0.0089	3.3276	-0.0298	0.1173	-0.000026	0.0138	-0.165579	0.093422	0.073615	0.095168	0.074991	1.4910	-0.104104	0.410047	0.2803	0.285504	0.151887
8.63	0.0001	0.0097	3.6190	-0.0280	0.1250	-0.000022	0.0156	0.034159	0.190553	0.150153	0.161747	0.127454	3.0412	-0.11077	0.494766	0.5717	0.485242	0.258148
8.64	0.0009	0.0113	4.2018	-0.0260	0.1321	-0.000018	0.0174	0.433635	0.384816	0.303228	0.294906	0.232381	6.1416	-0.127374	0.645807	1.1544	0.884717	0.470668
8.65	-0.0003	0.0066	2.4534	-0.0240	0.1387	-0.000014	0.0192	-0.165579	0.197972	0.155999	0.095168	0.074991	3.1596	-0.067434	0.389303	0.5939	0.285504	0.151887
8.66	0.0005	0.0093	3.4733	-0.0219	0.1447	-0.000010	0.0209	0.233897	0.141987	0.111884	0.228326	0.179917	2.2661	-0.081613	0.539409	0.4260	0.684979	0.364408
8.67	-0.0019	0.0070	2.5991	-0.0197	0.1502	-0.000008	0.0226	-0.96453	0.149407	0.11773	-0.171149	-0.134863	2.3845	-0.056428	0.430524	0.4482	-0.513448	-0.273153
8.68	0.0017	0.0093	3.4733	-0.0174	0.1551	-0.000005	0.0241	0.833111	0.141987	0.111884	0.428064	0.337307	2.2661	-0.064852	0.57806	0.4260	1.284193	0.683188
8.69	-0.0003	0.0077	2.8905	-0.0150	0.1594	-0.000003	0.0254	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	-0.04489	0.475556	0.1568	0.285504	0.151887
8.7	-0.0007	0.0074	2.7448	-0.0126	0.1630	-0.000002	0.0266	-0.365317	0.100841	0.079461	0.028589	0.022527	1.6094	-0.036939	0.476844	0.3025	0.085766	0.045627
8.71	0.0001	0.0074	2.7448	-0.0102	0.1660	-0.000001	0.0276	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	-0.029727	0.485632	0.3025	0.485242	0.258148
8.72	-0.0015	0.0085	3.1819	-0.0077	0.1684	0.000000	0.0283	-0.764792	0.044856	0.035346	-0.10457	-0.082399	0.7159	-0.024979	0.549243	0.1346	-0.31371	-0.166893
8.73	0.0005	0.0066	2.4534	-0.0051	0.1701	0.000000	0.0289	0.233897	0.197972	0.155999	0.228326	0.179917	3.1596	-0.014379	0.47741	0.5939	0.684979	0.364408
8.74	-0.0019	0.0062	2.3077	-0.0026	0.1711	0.000000	0.0293	-0.96453	0.246538	0.194268	-0.171149	-0.134863	3.9347	-0.007053	0.470185	0.7396	-0.513448	-0.273153
8.75	-0.0003	0.0109	4.0561	0.0000	0.1714	0.000000	0.0294	-0.165579	0.33625	0.264959	0.095168	0.074991	5.3665	-1.7E-13	0.798293	1.0088	0.285504	0.151887
8.76	-0.0003	0.0070	2.5991	0.0026	0.1711	0.000000	0.0293	-0.165579	0.149407	0.11773	0.095168	0.074991	2.3845	0.0073547	0.490325	0.4482	0.285504	0.151887
8.77	-0.0003	0.0077	2.8905	0.0051	0.1701	0.000000	0.0289	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	0.0152833	0.50744	0.1568	0.285504	0.151887
8.78	-0.0015	0.0089	3.3276	0.0077	0.1684	0.000000	0.0283	-0.764792	0.093422	0.073615	-0.10457	-0.082399	1.4910	0.0267599	0.588394	0.2803	-0.31371	-0.166893
8.79	-0.0003	0.0089	3.3276	0.0102	0.1660	0.000001	0.0276	-0.165579	0.093422	0.073615	0.095168	0.074991	1.4910	0.0355154	0.580186	0.2803	0.285504	0.151887
8.8	-0.0019	0.0085	3.1819	0.0126	0.1630	0.000002	0.0266	-0.96453	0.044856	0.035346	-0.171149	-0.134863	0.7159	0.0411943	0.53178	0.1346	-0.513448	-0.273153
8.81	-0.0011	0.0089	3.3276	0.0150	0.1594	0.000003	0.0254	-0.565055	0.093422	0.073615	-0.037991	-0.029936	1.4910	0.0525719	0.55694	0.2803	-0.113972	-0.060633
8.82	0.0001	0.0058	2.1620	0.0174	0.1551	0.000005	0.0241	0.034159	0.295104	0.232537	0.161747	0.127454	4.7098	0.0467992	0.417148	0.8853	0.485242	0.258148
8.83	-0.0003	0.0109	4.0561	0.0197	0.1502	0.000008	0.0226	-0.165579	0.33625	0.264959	0.095168	0.074991	5.3665	0.0916889	0.69955	1.0088	0.285504	0.151887
8.84	0.0013	0.0058	2.1620	0.0219	0.1447	0.000010	0.0209	0.633373	0.295104	0.232537	0.361485	0.284844	4.7098	0.058895	0.389257	0.8853	1.084455	0.576928
8.85	-0.0007	0.0081	3.0362	0.0240	0.1387	0.000014	0.0192	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	0.0730893	0.421953	0.0111	0.085766	0.045627
8.86	0.0001	0.0054	2.0163	0.0260	0.1321	0.000018	0.0174	0.034159	0.343669	0.270806	0.161747	0.127454	5.4849	0.0685287	0.347452	1.0310	0.485242	0.258148
8.87	0.0001	0.0101	3.7647	0.0280	0.1250	0.000022	0.0156	0.034159	0.239119	0.188422	0.161747	0.127454	3.8163	0.1172752	0.523821	0.7174	0.485242	0.258148
8.88	-0.0015	0.0077	2.8905	0.0298	0.1173	0.000026	0.0138	-0.764792	0.052275	0.041192	-0.10457	-0.082399	0.8343	0.0888916	0.350127	0.1568	-0.31371	-0.166893
8.89	-0.0003	0.0066	2.4534	0.0315	0.1093	0.000031	0.0119	-0.165579	0.197972	0.155999	0.095168	0.074991	3.1596	0.0883973	0.306731	0.5939	0.285504	0.151887
8.9	0.0009	0.0109	4.0561	0.0331	0.1008	0.000036	0.0102	0.433635	0.33625	0.264959	0.294906	0.232381	5.3665	0.1539746	0.469225	1.0088	0.884717	0.470668
8.91	-0.0007	0.0085	3.1819	0.0345	0.0918	0.000041	0.0084	-0.365317	0.044856	0.035346	0.028589	0.022527	0.7159	0.1125553	0.299606	0.1346	0.085766	0.045627
8.92	-0.0007	0.0031	1.1421	0.0358	0.0826	0.000046	0.0068	-0.365317	0.635063	0.500419	0.028589	0.022527	1.0136	0.0815631	0.188076	1.9052	0.085766	0.045627
8.93	-0.0003	0.0124	4.6388	0.0370	0.0730	0.000051	0.0053	-0.165579	0.530513	0.418035	0.095168	0.074991	8.4670	0.2066023	0.407779	1.5915	0.285504	0.151887

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9.12	0.0005	0.0035	1.2878	0.0298	-0.1173	0.000026	0.0138	0.233897	0.586498	0.46215	0.228326	0.179917	9.3605	0.069603	-0.274153	1.7595	0.684979	0.364408
9.13	-0.0003	0.0097	3.6190	0.0280	-0.1250	0.000022	0.0156	-0.165579	0.190553	0.150153	0.095168	0.074991	3.0412	0.1107702	-0.494766	0.5717	0.285504	0.151887
9.14	-0.0011	0.0089	3.3276	0.0260	-0.1321	0.000018	0.0174	-0.565055	0.093422	0.073615	-0.037991	-0.029936	1.4910	0.0910306	-0.461541	0.2803	-0.113972	-0.060633
9.15	-0.0015	0.0097	3.6190	0.0240	-0.1387	0.000014	0.0192	-0.764792	0.190553	0.150153	-0.10457	-0.082399	3.0412	0.0951127	-0.549096	0.5717	-0.31371	-0.166893
9.16	-0.0027	0.0062	2.3077	0.0219	-0.1447	0.000010	0.0209	-1.364006	0.246538	0.194268	-0.304308	-0.23979	3.9347	0.0601839	-0.397776	0.7396	-0.912924	-0.485674
9.17	-0.0011	0.0109	4.0561	0.0197	-0.1502	0.000008	0.0226	-0.565055	0.33625	0.264959	-0.037991	-0.029936	5.3665	0.0916889	-0.69955	1.0088	-0.113972	-0.060633
9.18	0.0009	0.0027	0.9964	0.0174	-0.1551	0.000005	0.0241	0.433635	0.683629	0.538688	0.294906	0.232381	1.0911	0.0386056	-0.344114	2.0509	0.884717	0.470668
9.19	-0.0007	0.0097	3.6190	0.0150	-0.1594	0.000003	0.0254	-0.365317	0.190553	0.150153	0.028589	0.022527	3.0412	0.0595682	-0.631058	0.5717	0.085766	0.045627
9.2	0.0005	0.0066	2.4534	0.0126	-0.1630	0.000002	0.0266	0.233897	0.197972	0.155999	0.228326	0.179917	3.1596	0.035452	-0.457653	0.5939	0.684979	0.364408
9.21	-0.0015	0.0120	4.4932	0.0102	-0.1660	0.000001	0.0276	-0.764792	0.481947	0.379766	-0.10457	-0.082399	7.6919	0.054421	-0.88903	1.4458	-0.31371	-0.166893
9.22	0.0005	0.0085	3.1819	0.0077	-0.1684	0.000000	0.0283	0.233897	0.044856	0.035346	0.228326	0.179917	0.7159	0.0249793	-0.549243	0.1346	0.684979	0.364408
9.23	-0.0011	0.0120	4.4932	0.0051	-0.1701	0.000000	0.0289	-0.565055	0.481947	0.379766	-0.037991	-0.029936	7.6919	0.0274268	-0.910629	1.4458	-0.113972	-0.060633
9.24	-0.0011	0.0074	2.7448	0.0026	-0.1711	0.000000	0.0293	-0.565055	0.100841	0.079461	-0.037991	-0.029936	1.6094	0.0075057	-0.500394	0.3025	-0.113972	-0.060633
9.25	-0.0003	0.0105	3.9104	0.0000	-0.1714	0.000000	0.0294	-0.165579	0.287685	0.226691	0.095168	0.074991	4.5914	1.735E-13	-0.758436	0.8631	0.285504	0.151887
9.26	-0.0007	0.0081	3.0362	-0.0026	-0.1711	0.000000	0.0293	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	-0.007808	-0.520533	0.0111	0.085766	0.045627
9.27	0.0001	0.0089	3.3276	-0.0051	-0.1701	0.000000	0.0289	0.034159	0.093422	0.073615	0.161747	0.127454	1.4910	-0.017899	-0.594281	0.2803	0.485242	0.258148
9.28	0.0017	0.0070	2.5991	-0.0077	-0.1684	0.000000	0.0283	0.833111	0.149407	0.11773	0.428064	0.337307	2.3845	-0.021948	-0.482592	0.4482	1.284193	0.683188
9.29	-0.0007	0.0081	3.0362	-0.0102	-0.1660	-0.000001	0.0276	-0.365317	0.00371	0.002923	0.028589	0.022527	0.0592	-0.030924	-0.505177	0.0111	0.085766	0.045627
9.3	0.0005	0.0066	2.4534	-0.0126	-0.1630	-0.000002	0.0266	0.233897	0.197972	0.155999	0.228326	0.179917	3.1596	-0.035452	-0.457653	0.5939	0.684979	0.364408
9.31	-0.0003	0.0128	4.7845	-0.0150	-0.1594	-0.000003	0.0254	-0.165579	0.579079	0.456304	0.095168	0.074991	9.2421	-0.087553	-0.927529	1.7372	0.285504	0.151887
9.32	0.0005	0.0054	2.0163	-0.0174	-0.1551	-0.000005	0.0241	0.233897	0.343669	0.270806	0.228326	0.179917	5.4849	-0.045775	-0.408019	1.0310	0.684979	0.364408
9.33	-0.0007	0.0066	2.4534	-0.0197	-0.1502	-0.000008	0.0226	-0.365317	0.197972	0.155999	0.028589	0.022527	3.1596	-0.055269	-0.421683	0.5939	0.085766	0.045627
9.34	-0.0007	0.0101	3.7647	-0.0219	-0.1447	-0.000010	0.0209	-0.365317	0.239119	0.188422	0.028589	0.022527	3.8163	-0.091797	-0.606715	0.7174	0.085766	0.045627
9.35	-0.0019	0.0124	4.6388	-0.0240	-0.1387	-0.000014	0.0192	-0.96453	0.530513	0.418035	-0.171149	-0.134863	8.4670	-0.134211	-0.774816	1.5915	-0.513448	-0.273153
9.36	0.0005	0.0038	1.4335	-0.0260	-0.1321	-0.000018	0.0174	0.233897	0.537932	0.423881	0.228326	0.179917	8.5854	-0.062395	-0.316356	1.6138	0.684979	0.364408
9.37	-0.0015	0.0097	3.6190	-0.0280	-0.1250	-0.000022	0.0156	-0.764792	0.190553	0.150153	-0.10457	-0.082399	3.0412	-0.11077	-0.494766	0.5717	-0.31371	-0.166893
9.38	-0.0007	0.0062	2.3077	-0.0298	-0.1173	-0.000026	0.0138	-0.365317	0.246538	0.194268	0.028589	0.022527	3.9347	-0.081878	-0.3225	0.7396	0.085766	0.045627
9.39	-0.0015	0.0081	3.0362	-0.0315	-0.1093	-0.000031	0.0119	-0.764792	0.00371	0.002923	-0.10457	-0.082399	0.0592	-0.095811	-0.332457	0.0111	-0.31371	-0.166893
9.4	0.0001	0.0070	2.5991	-0.0331	-0.1008	-0.000036	0.0102	0.034159	0.149407	0.11773	0.161747	0.127454	2.3845	-0.094761	-0.288775	0.4482	0.485242	0.258148
9.41	-0.0027	0.0074	2.7448	-0.0345	-0.0918	-0.000041	0.0084	-1.364006	0.100841	0.079461	-0.304308	-0.23979	1.6094	-0.100928	-0.268655	0.3025	-0.912924	-0.485674
9.42	0.0009	0.0054	2.0163	-0.0358	-0.0826	-0.000046	0.0068	0.433635	0.343669	0.270806	0.294906	0.232381	5.4849	-0.094211	-0.21724	1.0310	0.884717	0.470668
9.43	0.0001	0.0074	2.7448	-0.0370	-0.0730	-0.000051	0.0053	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	-0.108159	-0.213479	0.3025	0.485242	0.258148
9.44	0.0029	0.0074	2.7448	-0.0380	-0.0631	-0.000055	0.0040	1.432325	0.100841	0.079461	0.627802	0.494698	1.6094	-0.111142	-0.184572	0.3025	1.883407	1.001969

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9.61	-0.0007	0.0109	4.0561	-0.0315	0.1093	-0.000031	0.0119	-0.365317	0.33625	0.264959	0.028589	0.022527	5.3665	-0.146646	0.508851	1.0088	0.085766	0.045627
9.62	-0.0015	0.0054	2.0163	-0.0298	0.1173	-0.000026	0.0138	-0.764792	0.343669	0.270806	-0.10457	-0.082399	5.4849	-0.078371	0.308687	1.0310	-0.31371	-0.166893
9.63	-0.0023	0.0113	4.2018	-0.0280	0.1250	-0.000022	0.0156	-1.164268	0.384816	0.303228	-0.237729	-0.187326	6.1416	-0.13679	0.610986	1.1544	-0.713186	-0.379414
9.64	-0.0011	0.0093	3.4733	-0.0260	0.1321	-0.000018	0.0174	-0.565055	0.141987	0.111884	-0.037991	-0.029936	2.2661	-0.097088	0.492252	0.4260	-0.113972	-0.060633
9.65	0.0001	0.0113	4.2018	-0.0240	0.1387	-0.000014	0.0192	0.034159	0.384816	0.303228	0.161747	0.127454	6.1416	-0.117455	0.678079	1.1544	0.485242	0.258148
9.66	-0.0011	0.0058	2.1620	-0.0219	0.1447	-0.000010	0.0209	-0.565055	0.295104	0.232537	-0.037991	-0.029936	4.7098	-0.058895	0.389257	0.8853	-0.113972	-0.060633
9.67	-0.0007	0.0113	4.2018	-0.0197	0.1502	-0.000008	0.0226	-0.365317	0.384816	0.303228	0.028589	0.022527	6.1416	-0.096267	0.734478	1.1544	0.085766	0.045627
9.68	0.0005	0.0038	1.4335	-0.0174	0.1551	-0.000005	0.0241	0.233897	0.537932	0.423881	0.228326	0.179917	8.5854	-0.041678	0.371502	1.6138	0.684979	0.364403
9.69	-0.0007	0.0077	2.8905	-0.0150	0.1594	-0.000003	0.0254	-0.365317	0.052275	0.041192	0.028589	0.022527	0.8343	-0.04489	0.475556	0.1568	0.085766	0.045627
9.7	0.0005	0.0066	2.4534	-0.0126	0.1630	-0.000002	0.0266	0.233897	0.197972	0.155999	0.228326	0.179917	3.1596	-0.035452	0.457653	0.5939	0.684979	0.364403
9.71	0.0001	0.0109	4.0561	-0.0102	0.1660	-0.000001	0.0276	0.034159	0.33625	0.264959	0.161747	0.127454	5.3665	-0.047331	0.773214	1.0088	0.485242	0.258148
9.72	0.0005	0.0046	1.7249	-0.0077	0.1684	0.000000	0.0283	0.233897	0.440801	0.347343	0.228326	0.179917	7.0352	-0.019244	0.423127	1.3224	0.684979	0.364403
9.73	0.0001	0.0074	2.7448	-0.0051	0.1701	0.000000	0.0289	0.034159	0.100841	0.079461	0.161747	0.127454	1.6094	-0.014982	0.49743	0.3025	0.485242	0.258148
9.74	-0.0015	-0.0012	-0.4605	-0.0026	0.1711	0.000000	0.0293	-0.764792	1.169286	0.921378	-0.10457	-0.082399	18.6617	-0.004183	0.278863	3.5079	-0.31371	-0.166893
9.75	-0.0007	0.0136	5.0759	0.0000	0.1714	0.000000	0.0294	-0.365317	0.67621	0.532842	0.028589	0.022527	10.7923	-2.64E-13	1.077298	2.0286	0.085766	0.045627
9.76	-0.0003	0.0070	2.5991	0.0026	0.1711	0.000000	0.0293	-0.165579	0.149407	0.11773	0.095168	0.074991	2.3845	0.0073547	0.490325	0.4482	0.285504	0.151887
9.77	-0.0043	0.0101	3.7647	0.0051	0.1701	0.000000	0.0289	-2.162958	0.239119	0.188422	-0.570625	-0.449643	3.8163	0.0214718	0.712912	0.7174	-1.711876	-0.910715
9.78	-0.0023	0.0148	5.5130	0.0077	0.1684	0.000000	0.0283	-1.164268	0.821907	0.647649	-0.237729	-0.187326	13.1176	0.0534691	1.175672	2.4657	-0.713186	-0.379414
9.79	0.0001	0.0085	3.1819	0.0102	0.1660	0.000001	0.0276	0.034159	0.044856	0.035346	0.161747	0.127454	0.7159	0.0331522	0.54158	0.1346	0.485242	0.258148
9.8	-0.0003	0.0077	2.8905	0.0126	0.1630	0.000002	0.0266	-0.165579	0.052275	0.041192	0.095168	0.074991	0.8343	0.037682	0.48644	0.1568	0.285504	0.151887
9.81	-0.0007	0.0128	4.7845	0.0150	0.1594	0.000003	0.0254	-0.365317	0.579079	0.456304	0.028589	0.022527	9.2421	0.0875533	0.927529	1.7372	0.085766	0.045627
9.82	0.0001	0.0042	1.5792	0.0174	0.1551	0.000005	0.0241	0.034159	0.489366	0.385612	0.161747	0.127454	7.8103	0.0427024	0.380631	1.4681	0.485242	0.258148
9.83	-0.0003	0.0058	2.1620	0.0197	0.1502	0.000008	0.0226	-0.165579	0.295104	0.232537	0.095168	0.074991	4.7098	0.0529516	0.404	0.8853	0.285504	0.151887
9.84	-0.0011	0.0113	4.2018	0.0219	0.1447	0.000010	0.0209	-0.565055	0.384816	0.303228	-0.037991	-0.029936	6.1416	0.107072	0.707675	1.1544	-0.113972	-0.060633
9.85	-0.0007	0.0128	4.7845	0.0240	0.1387	0.000014	0.0192	-0.365317	0.579079	0.456304	0.028589	0.022527	9.2421	0.1397966	0.807061	1.7372	0.085766	0.045627
9.86	-0.0019	0.0089	3.3276	0.0260	0.1321	0.000018	0.0174	-0.96453	0.093422	0.073615	-0.171149	-0.134863	1.4910	0.0910306	0.461541	0.2803	-0.513448	-0.273153
9.87	-0.0019	0.0109	4.0561	0.0280	0.1250	0.000022	0.0156	-0.96453	0.33625	0.264959	-0.171149	-0.134863	5.3665	0.1302851	0.581931	1.0088	-0.513448	-0.273153
9.88	-0.0007	0.0085	3.1819	0.0298	0.1173	0.000026	0.0138	-0.365317	0.044856	0.035346	0.028589	0.022527	0.7159	0.097177	0.382762	0.1346	0.085766	0.045627
9.89	-0.0007	0.0101	3.7647	0.0315	0.1093	0.000031	0.0119	-0.365317	0.239119	0.188422	0.028589	0.022527	3.8163	0.1320027	0.458039	0.7174	0.085766	0.045627
9.9	-0.0019	0.0050	1.8706	0.0331	0.1008	0.000036	0.0102	-0.96453	0.392235	0.309075	-0.171149	-0.134863	6.2600	0.0850304	0.259123	1.1767	-0.513448	-0.273153
9.91	-0.0011	0.0101	3.7647	0.0345	0.0918	0.000041	0.0084	-0.565055	0.239119	0.188422	-0.037991	-0.029936	3.8163	0.1446485	0.385033	0.7174	-0.113972	-0.060633

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Model : POTONGAN KAKI JAKET
Posisi : 45 DRAJAT Perioda : 3 detik
H : 2 Cm waktu : 10 detik

t	SG trans	SG longitu	F long	u	u dot	u^3	u dot^2	F trans	Fbrce long	Fbrce long	Fbrce tran	Fbrce tran	Frata	F rata *u	Frata*udot	Flong -	Ftans -	Frata
det	Eta 1	Eta 2	N	m/det	m/det^2			N	horisontal	miring	horisontal	miring	longitu	N	N	2F long sil	2F tran sil	trans
0.01	0.00047	0.030796	11.4866	0.0373	-0.0056	0.000052	0.0000	0.233897	2.313756	1.8232	-1.782428	-1.404523	7.3855	0.41366	0.006738	6.9413	-5.347285	-2.844746
0.02	0.000872	0.0265	9.8839	0.0371	-0.0111	0.000051	0.0001	0.433635	1.779533	1.402242	-1.849008	-1.456987	5.6802	0.316266	0.026284	5.3386	-5.547023	-2.951006
0.03	0.0009	0.0242	9.0098	0.0368	-0.0166	0.000050	0.0003	0.433635	1.488139	1.172628	-1.849008	-1.456987	4.7501	0.261858	0.047952	4.4644	-5.547023	-2.951006
0.04	-0.0003	0.0273	10.1753	0.0362	-0.0220	0.000048	0.0005	-0.165579	1.876664	1.478779	-1.64927	-1.299597	5.9903	0.325618	0.035111	5.6300	-4.94781	-2.632225
0.05	0.0005	0.0277	10.3210	0.0356	-0.0274	0.000045	0.0008	0.233897	1.92523	1.517049	-1.782428	-1.404523	6.1453	0.328	0.052195	5.7757	-5.347285	-2.844746
0.06	0.0005	0.0285	10.6124	0.0348	-0.0326	0.000042	0.0011	0.233897	2.022361	1.593586	-1.782428	-1.404523	6.4554	0.336838	0.05651	6.0671	-5.347285	-2.844746
0.07	0.0009	0.0253	9.4468	0.0339	-0.0378	0.000039	0.0014	0.433635	1.633836	1.287435	-1.849008	-1.456987	5.2152	0.264825	0.099125	4.9015	-5.547023	-2.951006
0.08	-0.0019	0.0269	10.0296	0.0328	-0.0427	0.000035	0.0018	-0.96453	1.828099	1.440511	-1.382953	-1.089743	5.8353	0.286972	0.037599	5.4843	-4.148858	-2.207184
0.09	-0.0007	0.0296	11.0495	0.0316	-0.0475	0.000032	0.0023	-0.365317	2.168058	1.708393	-1.582691	-1.247133	6.9204	0.327919	0.041409	6.5042	-4.748072	-2.525965
0.1	-0.0011	0.0281	10.4667	0.0303	-0.0521	0.000028	0.0027	-0.565055	1.973796	1.555317	-1.516111	-1.19467	6.3003	0.286051	0.053117	5.9214	-4.548334	-2.419705
0.11	-0.0015	0.0265	9.8839	0.0288	-0.0565	0.000024	0.0032	-0.764792	1.779533	1.402242	-1.449532	-1.142206	5.6802	0.245624	0.065945	5.3386	-4.348596	-2.313445
0.12	0.0005	0.0292	10.9038	0.0273	-0.0607	0.000020	0.0037	0.233897	2.119493	1.670124	-1.782428	-1.404523	6.7654	0.276774	0.094542	6.3585	-5.347285	-2.844746
0.13	0.0005	0.0234	8.7184	0.0256	-0.0646	0.000017	0.0042	0.233897	1.391007	1.09609	-1.782428	-1.404523	4.4401	0.170576	0.184863	4.1730	-5.347285	-2.844746
0.14	-0.0011	0.0277	10.3210	0.0238	-0.0683	0.000014	0.0047	-0.565055	1.92523	1.517049	-1.516111	-1.19467	6.1453	0.219834	0.075562	5.7757	-4.548334	-2.419705
0.15	-0.0011	0.0257	9.5925	0.0220	-0.0717	0.000011	0.0051	-0.565055	1.682401	1.325704	-1.516111	-1.19467	5.3702	0.177147	0.110482	5.0472	-4.548334	-2.419705
0.16	0.0001	0.0234	8.7184	0.0200	-0.0749	0.000008	0.0056	0.034159	1.391007	1.09609	-1.715849	-1.35206	4.4401	0.133518	0.199165	4.1730	-5.147548	-2.738486
0.17	-0.0015	0.0249	9.3012	0.0180	-0.0777	0.000006	0.0060	-0.764792	1.58527	1.249166	-1.449532	-1.142206	5.0602	0.136808	0.117645	4.7558	-4.348596	-2.313445
0.18	-0.0027	0.0226	8.4270	0.0159	-0.0802	0.000004	0.0064	-1.364006	1.293876	1.019552	-1.249794	-0.984816	4.1300	0.098687	0.1152	3.8816	-3.749382	-1.994664
0.19	0.0001	0.0265	9.8839	0.0138	-0.0824	0.000003	0.0068	0.034159	1.779533	1.402242	-1.715849	-1.35206	5.6802	0.117351	0.162054	5.3386	-5.147548	-2.738486
0.2	-0.0011	0.0273	10.1753	0.0116	-0.0843	0.000002	0.0071	-0.565055	1.876664	1.478779	-1.516111	-1.19467	5.9903	0.103885	0.10059	5.6300	-4.548334	-2.419705
0.21	-0.0015	0.0249	9.3012	0.0093	-0.0859	0.000001	0.0074	-0.764792	1.58527	1.249166	-1.449532	-1.142206	5.0602	0.070623	0.130034	4.7558	-4.348596	-2.313445
0.22	0.0017	0.0222	8.2813	0.0070	-0.0871	0.000000	0.0076	0.833111	1.24531	0.981283	-1.982166	-1.561913	3.9750	0.041801	0.323979	3.7359	-5.946499	-3.163526
0.23	0.0009	0.0300	11.1952	0.0047	-0.0880	0.000000	0.0077	0.433635	2.216624	1.746662	-1.849008	-1.456987	7.0754	0.049767	0.139313	6.6499	-5.547023	-4.426509
0.24	0.0009	0.0277	10.3210	0.0023	-0.0885	0.000000	0.0078	0.433635	1.92523	1.517049	-1.849008	-1.456987	6.1453	0.021655	0.186247	5.7757	-5.547023	-4.426509
0.25	0.0009	0.0273	10.1753	0.0000	-0.0887	0.000000	0.0079	0.433635	1.876664	1.478779	-1.849008	-1.456987	5.9903	-1.29E-16	0.194314	5.6300	-5.547023	-4.426509
0.26	-0.0015	0.0285	10.6124	-0.0023	-0.0885	0.000000	0.0078	-0.764792	2.022361	1.593586	-1.449532	-1.142206	6.4554	-0.022748	0.064831	6.0671	-4.348596	-3.470167

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0.46	-0.0007	0.0296	11.0495	-0.0362	-0.0220	-0.000048	0.0005	-0.365317	2.168058	1.708393	-1.582691	-1.247133	6.9204	-0.376177	0.019219	6.5042	-4.748072	-3.788948
0.47	-0.0007	0.0245	9.1555	-0.0368	-0.0166	-0.000050	0.0003	-0.365317	1.536705	1.210897	-1.582691	-1.247133	4.9051	-0.270404	0.033236	4.6101	-4.748072	-3.788948
0.48	-0.0023	0.0249	9.3012	-0.0371	-0.0111	-0.000051	0.0001	-1.164268	1.58527	1.249166	-1.316373	-1.03728	5.0602	-0.281741	0.012387	4.7558	-3.94912	-3.151386
0.49	0.0001	0.0265	9.8839	-0.0373	-0.0056	-0.000052	0.0000	0.034159	1.779533	1.402242	-1.715849	-1.35206	5.6802	-0.31815	0.010944	5.3386	-5.147548	-4.107728
0.5	-0.0003	0.0257	9.5925	-0.0374	0.0000	-0.000052	0.0000	-0.165579	1.682401	1.325704	-1.64927	-1.299597	5.3702	-0.30138	-2.08E-16	5.0472	-4.94781	-3.948338
0.51	-0.0003	0.0285	10.6124	-0.0373	0.0056	-0.000052	0.0000	-0.165579	2.022361	1.593586	-1.64927	-1.299597	6.4554	-0.361564	-0.007415	6.0671	-4.94781	-3.948338
0.52	0.0001	0.0245	9.1555	-0.0371	0.0111	-0.000051	0.0001	0.034159	1.536705	1.210897	-1.715849	-1.35206	4.9051	-0.273109	-0.026669	4.6101	-5.147548	-4.107728
0.53	0.0001	0.0277	10.3210	-0.0368	0.0166	-0.000050	0.0003	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	-0.33877	-0.028331	5.7757	-5.147548	-4.107728
0.54	0.0013	0.0269	10.0296	-0.0362	0.0220	-0.000048	0.0005	0.633373	1.828099	1.440511	-1.915587	-1.50945	5.8353	-0.317191	-0.054643	5.4843	-5.746761	-4.585899
0.55	-0.0019	0.0273	10.1753	-0.0356	0.0274	-0.000045	0.0008	-0.96453	1.876664	1.478779	-1.382953	-1.089743	5.9903	-0.319725	-0.021738	5.6300	-4.148858	-3.310777
0.56	0.0009	0.0288	10.7581	-0.0348	0.0326	-0.000042	0.0011	0.433635	2.070927	1.631855	-1.849008	-1.456987	6.6104	-0.344927	-0.060195	6.2128	-5.547023	-4.426509
0.57	-0.0003	0.0269	10.0296	-0.0339	0.0378	-0.000039	0.0014	-0.165579	1.828099	1.440511	-1.64927	-1.299597	5.8353	-0.296312	-0.063392	5.4843	-4.94781	-3.948338
0.58	-0.0007	0.0245	9.1555	-0.0328	0.0427	-0.000035	0.0018	-0.365317	1.536705	1.210897	-1.582691	-1.247133	4.9051	-0.24123	-0.085448	4.6101	-4.748072	-3.788948
0.59	0.0009	0.0249	9.3012	-0.0316	0.0475	-0.000032	0.0023	0.433635	1.58527	1.249166	-1.849008	-1.456987	5.0602	-0.239772	-0.128871	4.7558	-5.547023	-4.426509
0.6	-0.0011	0.0300	11.1952	-0.0303	0.0521	-0.000028	0.0027	-0.565055	2.216624	1.746662	-1.516111	-1.19467	7.0754	-0.321243	-0.03049	6.6499	-4.548334	-3.629557
0.61	-0.0015	0.0269	10.0296	-0.0288	0.0565	-0.000024	0.0032	-0.764792	1.828099	1.440511	-1.449532	-1.142206	5.8353	-0.252327	-0.061037	5.4843	-4.348596	-3.470167
0.62	0.0001	0.0245	9.1555	-0.0273	0.0607	-0.000020	0.0037	0.034159	1.536705	1.210897	-1.715849	-1.35206	4.9051	-0.200671	-0.145664	4.6101	-5.147548	-4.107728
0.63	0.0005	0.0269	10.0296	-0.0256	0.0646	-0.000017	0.0042	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	-0.224175	-0.134352	5.4843	-5.347285	-4.267119
0.64	0.0005	0.0273	10.1753	-0.0238	0.0683	-0.000014	0.0047	0.233897	1.876664	1.478779	-1.782428	-1.404523	5.9903	-0.214289	-0.136076	5.6300	-5.347285	-4.267119
0.65	0.0009	0.0245	9.1555	-0.0220	0.0717	-0.000011	0.0051	0.433635	1.536705	1.210897	-1.849008	-1.456987	4.9051	-0.161806	-0.200804	4.6101	-5.547023	-4.426509
0.66	0.0001	0.0257	9.5925	-0.0200	0.0749	-0.000008	0.0056	0.034159	1.682401	1.325704	-1.715849	-1.35206	5.3702	-0.161487	-0.160162	5.0472	-5.147548	-4.107728
0.67	-0.0007	0.0292	10.9038	-0.0180	0.0777	-0.000006	0.0060	-0.365317	2.119493	1.670124	-1.582691	-1.247133	6.7654	-0.182912	-0.074469	6.3585	-4.748072	-3.788948
0.68	0.0009	0.0261	9.7382	-0.0159	0.0802	-0.000004	0.0064	0.433635	1.730967	1.363973	-1.849008	-1.456987	5.5252	-0.132025	-0.19672	5.1929	-5.547023	-4.426509
0.69	-0.0007	0.0234	8.7184	-0.0138	0.0824	-0.000003	0.0068	-0.365317	1.391007	1.09609	-1.582691	-1.247133	4.4401	-0.091729	-0.186389	4.1730	-4.748072	-3.788948
0.7	0.0021	0.0269	10.0296	-0.0116	0.0843	-0.000002	0.0071	1.032849	1.828099	1.440511	-2.048746	-1.614377	5.8353	-0.101197	-0.242654	5.4843	-6.146237	-4.90468
0.71	0.0001	0.0273	10.1753	-0.0093	0.0859	-0.000001	0.0074	0.034159	1.876664	1.478779	-1.715849	-1.35206	5.9903	-0.083604	-0.153903	5.6300	-5.147548	-4.107728
0.72	0.0021	0.0285	10.6124	-0.0070	0.0871	0.000000	0.0076	1.032849	2.022361	1.593586	-2.048746	-1.614377	6.4554	-0.067884	-0.220372	6.0671	-6.146237	-4.90468
0.73	0.0021	0.0249	9.3012	-0.0047	0.0880	0.000000	0.0077	1.032849	1.58527	1.249166	-2.048746	-1.614377	5.0602	-0.035592	-0.291322	4.7558	-6.146237	-4.90468
0.74	-0.0011	0.0261	9.7382	-0.0023	0.0885	0.000000	0.0078	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	-0.01947	-0.128609	5.1929	-4.548334	-3.629557
0.75	0.0005	0.0288	10.7581	0.0000	0.0887	0.000000	0.0079	0.233897	2.070927	1.631855	-1.782428	-1.404523	6.6104	9.2E-16	-0.145808	6.2128	-5.347285	-4.267119
0.76	0.0009	0.0249	9.3012	0.0023	0.0885	0.000000	0.0078	0.433635	1.58527	1.249166	-1.849008	-1.456987	5.0602	0.017831	-0.240034	4.7558	-5.547023	-4.426509
0.77	-0.0027	0.0261	9.7382	0.0047	0.0880	0.000000	0.0077	-1.364006	1.730967	1.363973	-1.249794	-0.984816	5.5252	0.038863	-0.057568	5.1929	-3.749382	-2.991996
0.78	-0.0003	0.0281	10.4667	0.0070	0.0871	0.000000	0.0076	-0.165579	1.973796	1.555317	-1.64927	-1.299597	6.3003	0.066254	-0.123559	5.9214	-4.94781	-3.948338
0.79	0.0033	0.0281	10.4667	0.0093	0.0859	0.000001	0.0074	1.632063	1.973796	1.555317	-2.248484	-1.771767	6.3003	0.087932	-0.276214	5.9214	-6.745451	-5.382851

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0.97	-0.0007	0.0265	9.8839	0.0368	0.0166	0.000050	0.0003	-0.365317	1.779533	1.402242	-1.582691	-1.247133	5.6802	0.313133	-0.026022	5.3386	-4.748072	-3.788948
0.98	-0.0027	0.0242	9.0098	0.0371	0.0111	0.000051	0.0001	-1.364006	1.488139	1.172628	-1.249794	-0.984816	4.7501	0.264478	-0.012097	4.4644	-3.749382	-2.991996
0.99	0.0009	0.0242	9.0098	0.0373	0.0056	0.000052	0.0000	0.433635	1.488139	1.172628	-1.849008	-1.456987	4.7501	0.266054	-0.016069	4.4644	-5.547023	-4.426509
1	0.0005	0.0292	10.9038	0.0374	0.0000	0.000052	0.0000	0.233897	2.119493	1.670124	-1.782428	-1.404523	6.7654	0.379679	5.79E-16	6.3585	-5.347285	-4.267119
1.01	0.0033	0.0277	10.3210	0.0373	-0.0056	0.000052	0.0000	1.632063	1.92523	1.517049	-2.248484	-1.771767	6.1453	0.344199	0.01839	5.7757	-6.745451	-5.382851
1.02	-0.0007	0.0261	9.7382	0.0371	-0.0111	0.000051	0.0001	-0.365317	1.730967	1.363973	-1.582691	-1.247133	5.5252	0.307635	0.01837	5.1929	-4.748072	-3.788948
1.03	0.0005	0.0273	10.1753	0.0368	-0.0166	0.000050	0.0003	0.233897	1.876664	1.478779	-1.782428	-1.404523	5.9903	0.330225	0.033092	5.6300	-5.347285	-4.267119
1.04	-0.0003	0.0288	10.7581	0.0362	-0.0220	0.000048	0.0005	-0.165579	2.070927	1.631855	-1.64927	-1.299597	6.6104	0.359324	0.027453	6.2128	-4.94781	-3.948338
1.05	0.0001	0.0273	10.1753	0.0356	-0.0274	0.000045	0.0008	0.034159	1.876664	1.478779	-1.715849	-1.35206	5.9903	0.319725	0.049101	5.6300	-5.147548	-4.107728
1.06	0.0009	0.0238	8.8641	0.0348	-0.0326	0.000042	0.0011	0.433635	1.439573	1.134359	-1.849008	-1.456987	4.5951	0.239771	0.09704	4.3187	-5.547023	-4.426509
1.07	-0.0015	0.0285	10.6124	0.0339	-0.0378	0.000039	0.0014	-0.764792	2.022361	1.593586	-1.449532	-1.142206	6.4554	0.3278	0.027658	6.0671	-4.348596	-3.470167
1.08	-0.0007	0.0265	9.8839	0.0328	-0.0427	0.000035	0.0018	-0.365317	1.779533	1.402242	-1.582691	-1.247133	5.6802	0.279349	0.066903	5.3386	-4.748072	-3.788948
1.09	0.0005	0.0269	10.0296	0.0316	-0.0475	0.000032	0.0023	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	0.2765	0.098755	5.4843	-5.347285	-4.267119
1.1	-0.0007	0.0253	9.4468	0.0303	-0.0521	0.000028	0.0027	-0.365317	1.633836	1.287435	-1.582691	-1.247133	5.2152	0.236783	0.095204	4.9015	-4.748072	-3.788948
1.11	-0.0015	0.0281	10.4667	0.0288	-0.0565	0.000024	0.0032	-0.764792	1.973796	1.555317	-1.449532	-1.142206	6.3003	0.272437	0.046314	5.9214	-4.348596	-3.470167
1.12	-0.0023	0.0304	11.3409	0.0273	-0.0607	0.000020	0.0037	-1.164268	2.26519	1.784931	-1.316373	-1.03728	7.2305	0.2958	-0.00613	6.7956	-3.94912	-3.151386
1.13	0.0001	0.0277	10.3210	0.0256	-0.0646	0.000017	0.0042	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	0.236086	0.110217	5.7757	-5.147548	-4.107728
1.14	-0.0007	0.0261	9.7382	0.0238	-0.0683	0.000014	0.0047	-0.365317	1.730967	1.363973	-1.582691	-1.247133	5.5252	0.197652	0.112937	5.1929	-4.748072	-3.788948
1.15	0.0001	0.0257	9.5925	0.0220	-0.0717	0.000011	0.0051	0.034159	1.682401	1.325704	-1.715849	-1.35206	5.3702	0.177147	0.153464	5.0472	-5.147548	-4.107728
1.16	-0.0003	0.0245	9.1555	0.0200	-0.0749	0.000008	0.0056	-0.165579	1.536705	1.210897	-1.64927	-1.299597	4.9051	0.147502	0.164711	4.6101	-4.94781	-3.948338
1.17	-0.0007	0.0288	10.7581	0.0180	-0.0777	0.000006	0.0060	-0.365317	2.070927	1.631855	-1.582691	-1.247133	6.6104	0.17872	0.081216	6.2128	-4.748072	-3.788948
1.18	-0.0011	0.0281	10.4667	0.0159	-0.0802	0.000004	0.0064	-0.565055	1.973796	1.555317	-1.516111	-1.19467	6.3003	0.150547	0.081767	5.9214	-4.548334	-3.629557
1.19	0.0005	0.0242	9.0098	0.0138	-0.0824	0.000003	0.0068	0.233897	1.488139	1.172628	-1.782428	-1.404523	4.7501	0.098135	0.22147	4.4644	-5.347285	-4.267119
1.2	0.0013	0.0273	10.1753	0.0116	-0.0843	0.000002	0.0071	0.633373	1.876664	1.478779	-1.915587	-1.50945	5.9903	0.103885	0.201646	5.6300	-5.746761	-4.585899
1.21	-0.0003	0.0288	10.7581	0.0093	-0.0859	0.000001	0.0074	-0.165579	2.070927	1.631855	-1.64927	-1.299597	6.6104	0.092259	0.106921	6.2128	-4.94781	-3.948338
1.22	0.0017	0.0288	10.7581	0.0070	-0.0871	0.000000	0.0076	0.833111	2.070927	1.631855	-1.982166	-1.561913	6.6104	0.069514	0.195413	6.2128	-5.946499	-4.74529
1.23	-0.0003	0.0238	8.8641	0.0047	-0.0880	0.000000	0.0077	-0.165579	1.439573	1.134359	-1.64927	-1.299597	4.5951	0.032321	0.208818	4.3187	-4.94781	-3.948338
1.24	-0.0007	0.0292	10.9038	0.0023	-0.0885	0.000000	0.0078	-0.365317	2.119493	1.670124	-1.582691	-1.247133	6.7654	0.02384	0.084813	6.3585	-4.748072	-3.788948
1.25	0.0013	0.0273	10.1753	0.0000	-0.0887	0.000000	0.0079	0.633373	1.876664	1.478779	-1.915587	-1.50945	5.9903	-1.69E-15	0.212024	5.6300	-5.746761	-4.585899
1.26	-0.0011	0.0269	10.0296	-0.0023	-0.0885	0.000000	0.0078	-0.565055	1.828099	1.440511	-1.516111	-1.19467	5.8353	-0.020563	0.113241	5.4843	-4.548334	-3.629557
1.27	-0.0007	0.0292	10.9038	-0.0047	-0.0880	0.000000	0.0077	-0.365317	2.119493	1.670124	-1.582691	-1.247133	6.7654	-0.047586	0.08431	6.3585	-4.748072	-3.788948
1.28	0.0009	0.0300	11.1952	-0.0070	-0.0871	0.000000	0.0076	0.433635	2.216624	1.746662	-1.849008	-1.456987	7.0754	-0.074405	0.137933	6.6499	-5.547023	-4.426509
1.29	-0.0015	0.0257	9.5925	-0.0093	-0.0859	-0.000001	0.0074	-0.764792	1.682401	1.325704	-1.449532	-1.142206	5.3702	-0.07495	0.115119	5.0472	-4.348596	-3.470167
1.3	0.0001	0.0304	11.3409	-0.0116	-0.0843	-0.000002	0.0071	0.034159	2.26519	1.784931	-1.715849	-1.35206	7.2305	-0.125392	0.09254	6.7956	-5.147548	-4.107728

1.48	-0.0015	0.0249	9.3012	-0.0371	-0.0111	-0.000051	0.0001	-0.764792	1.58527	1.249166	-1.449532	-1.142206	5.0602	-0.281741	0.016826	4.7558	-4.348596	-3.470167
1.49	0.0005	0.0277	10.3210	-0.0373	-0.0056	-0.000052	0.0000	0.233897	1.92523	1.517049	-1.782428	-1.404523	6.1453	-0.344199	0.010606	5.7757	-5.347285	-4.267119
1.5	-0.0007	0.0292	10.9038	-0.0374	0.0000	-0.000052	0.0000	-0.365317	2.119493	1.670124	-1.582691	-1.247133	6.7654	-0.379679	-5.73E-16	6.3585	-4.748072	-3.788948
1.51	0.0001	0.0285	10.6124	-0.0373	0.0056	-0.000052	0.0000	0.034159	2.022361	1.593586	-1.715849	-1.35206	6.4554	-0.361564	-0.008527	6.0671	-5.147548	-4.107728
1.52	-0.0019	0.0218	8.1356	-0.0371	0.0111	-0.000051	0.0001	-0.96453	1.196745	0.943014	-1.382953	-1.089743	3.8200	-0.21269	-0.022326	3.5902	-4.148858	-3.310777
1.53	0.0001	0.0265	9.8839	-0.0368	0.0166	-0.000050	0.0003	0.034159	1.779533	1.402242	-1.715849	-1.35206	5.6802	-0.313133	-0.032659	5.3386	-5.147548	-4.107728
1.54	0.0013	0.0281	10.4667	-0.0362	0.0220	-0.000048	0.0005	0.633373	1.973796	1.555317	-1.915587	-1.50945	6.3003	-0.342471	-0.048899	5.9214	-5.746761	-4.585899
1.55	0.0001	0.0277	10.3210	-0.0356	0.0274	-0.000045	0.0008	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	-0.328	-0.046722	5.7757	-5.147548	-4.107728
1.56	0.0005	0.0265	9.8839	-0.0348	0.0326	-0.000042	0.0011	0.233897	1.779533	1.402242	-1.782428	-1.404523	5.6802	-0.296394	-0.070681	5.3386	-5.347285	-4.267119
1.57	-0.0015	0.0269	10.0296	-0.0339	0.0378	-0.000039	0.0014	-0.764792	1.828099	1.440511	-1.449532	-1.142206	5.8353	-0.296312	-0.040771	5.4843	-4.348596	-3.470167
1.58	-0.0011	0.0269	10.0296	-0.0328	0.0427	-0.000035	0.0018	-0.565055	1.828099	1.440511	-1.516111	-1.19467	5.8353	-0.286972	-0.054662	5.4843	-4.548334	-3.629557
1.59	0.0009	0.0277	10.3210	-0.0316	0.0475	-0.000032	0.0023	0.433635	1.92523	1.517049	-1.849008	-1.456987	6.1453	-0.291191	-0.099993	5.7757	-5.547023	-4.426509
1.6	0.0009	0.0285	10.6124	-0.0303	0.0521	-0.000028	0.0027	0.433635	2.022361	1.593586	-1.849008	-1.456987	6.4554	-0.29309	-0.100639	6.0671	-5.547023	-4.426509
1.61	-0.0003	0.0296	11.0495	-0.0288	0.0565	-0.000024	0.0032	-0.165579	2.168058	1.708393	-1.64927	-1.299597	6.9204	-0.299251	-0.060549	6.5042	-4.94781	-3.948338
1.62	0.0005	0.0285	10.6124	-0.0273	0.0607	-0.000020	0.0037	0.233897	2.022361	1.593586	-1.782428	-1.404523	6.4554	-0.26409	-0.105083	6.0671	-5.347285	-4.267119
1.63	-0.0003	0.0324	12.0694	-0.0256	0.0646	-0.000017	0.0042	-0.165579	2.508018	1.976276	-1.64927	-1.299597	8.0056	-0.307552	-0.029959	7.5241	-4.94781	-3.948338
1.64	-0.0003	0.0257	9.5925	-0.0238	0.0683	-0.000014	0.0047	-0.165579	1.682401	1.325704	-1.64927	-1.299597	5.3702	-0.192107	-0.132514	5.0472	-4.94781	-3.948338
1.65	-0.0011	0.0249	9.3012	-0.0220	0.0717	-0.000011	0.0051	-0.565055	1.58527	1.249166	-1.516111	-1.19467	5.0602	-0.166919	-0.122939	4.7558	-4.548334	-3.629557
1.66	0.0005	0.0265	9.8839	-0.0200	0.0749	-0.000008	0.0056	0.233897	1.779533	1.402242	-1.782428	-1.404523	5.6802	-0.170811	-0.162113	5.3386	-5.347285	-4.267119
1.67	-0.0003	0.0273	10.1753	-0.0180	0.0777	-0.000006	0.0060	-0.165579	1.876664	1.478779	-1.64927	-1.299597	5.9903	-0.161956	-0.123722	5.6300	-4.94781	-3.948338
1.68	-0.0011	0.0269	10.0296	-0.0159	0.0802	-0.000004	0.0064	-0.565055	1.828099	1.440511	-1.516111	-1.19467	5.8353	-0.139434	-0.102667	5.4843	-4.548334	-3.629557
1.69	0.0009	0.0281	10.4667	-0.0138	0.0824	-0.000003	0.0068	0.433635	1.973796	1.555317	-1.849008	-1.456987	6.3003	-0.130161	-0.166352	5.9214	-5.547023	-4.426509
1.7	-0.0011	0.0238	8.8641	-0.0116	0.0843	-0.000002	0.0071	-0.565055	1.439573	1.134359	-1.516111	-1.19467	4.5951	-0.079689	-0.16649	4.3187	-4.548334	-3.629557
1.71	-0.0003	0.0304	11.3409	-0.0093	0.0859	-0.000001	0.0074	-0.165579	2.26519	1.784931	-1.64927	-1.299597	7.2305	-0.100913	-0.077092	6.7956	-4.94781	-3.948338
1.72	0.0005	0.0238	8.8641	-0.0070	0.0871	0.000000	0.0076	0.233897	1.439573	1.134359	-1.782428	-1.404523	4.5951	-0.048322	-0.241541	4.3187	-5.347285	-4.267119
1.73	0.0005	0.0273	10.1753	-0.0047	0.0880	0.000000	0.0077	0.233897	1.876664	1.478779	-1.782428	-1.404523	5.9903	-0.042134	-0.175212	5.6300	-5.347285	-4.267119
1.74	0.0005	0.0249	9.3012	-0.0023	0.0885	0.000000	0.0078	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	-0.017831	-0.222359	4.7558	-5.347285	-4.267119
1.75	0.0001	0.0253	9.4468	0.0000	0.0887	0.000000	0.0079	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	2.47E-15	-0.19739	4.9015	-5.147548	-4.107728
1.76	0.0017	0.0265	9.8839	0.0023	0.0885	0.000000	0.0078	0.833111	1.779533	1.402242	-1.982166	-1.561913	5.6802	0.020016	-0.244648	5.3386	-5.946499	-4.74529
1.77	-0.0011	0.0257	9.5925	0.0047	0.0880	0.000000	0.0077	-0.565055	1.682401	1.325704	-1.516111	-1.19467	5.3702	0.037773	-0.135486	5.0472	-4.548334	-3.629557
1.78	0.0009	0.0222	8.2813	0.0070	0.0871	0.000000	0.0076	0.433635	1.24531	0.981283	-1.849008	-1.456987	3.9750	0.041801	-0.289188	3.7359	-5.547023	-4.426509
1.79	0.0013	0.0285	10.6124	0.0093	0.0859	0.000001	0.0074	0.633373	2.022361	1.593586	-1.915587	-1.50945	6.4554	0.090095	-0.182991	6.0671	-5.746761	-4.585899
1.8	0.0005	0.0257	9.5925	0.0116	0.0843	0.000002	0.0071	0.233897	1.682401	1.325704	-1.782428	-1.404523	5.3702	0.093131	-0.19725	5.0472	-5.347285	-4.267119
1.81	0.0013	0.0253	9.4468	0.0138	0.0824	0.000003	0.0068	0.633373	1.633836	1.287435	-1.915587	-1.50945	5.2152	0.107743	-0.232927	4.9015	-5.746761	-4.585899
1.82	-0.0003	0.0312	11.6323	0.0159	0.0802	0.000004	0.0064	-0.165579	2.362321	1.861469	-1.64927	-1.299597	7.5405	0.180181	-0.058085	7.0870	-4.94781	-3.948338

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1.99	-0.0003	0.0296	11.0495	0.0373	0.0056	0.000052	0.0000	-0.165579	2.168058	1.708393	-1.64927	-1.299597	6.9204	0.387612	-0.005965	6.5042	-4.94781	-3.948338
2	-0.0011	0.0304	11.3409	0.0374	0.0000	0.000052	0.0000	-0.565055	2.26519	1.784931	-1.516111	-1.19467	7.2305	0.405778	3.71E-16	6.7956	-4.548334	-3.629557
2.01	-0.0003	0.0234	8.7184	0.0373	-0.0056	0.000052	0.0000	-0.165579	1.391007	1.09609	-1.64927	-1.299597	4.4401	0.248689	0.013699	4.1730	-4.94781	-3.948338
2.02	0.0005	0.0249	9.3012	0.0371	-0.0111	0.000051	0.0001	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	0.281741	0.027924	4.7558	-5.347285	-4.267119
2.03	0.0001	0.0253	9.4468	0.0368	-0.0166	0.000050	0.0003	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	0.287496	0.036987	4.9015	-5.147548	-4.107728
2.04	0.0009	0.0257	9.5925	0.0362	-0.0220	0.000048	0.0005	0.433635	1.682401	1.325704	-1.849008	-1.456987	5.3702	0.291911	0.055983	5.0472	-5.547023	-4.426509
2.05	-0.0011	0.0261	9.7382	0.0356	-0.0274	0.000045	0.0008	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	0.294903	0.039821	5.1929	-4.548334	-3.629557
2.06	0.0013	0.0285	10.6124	0.0348	-0.0326	0.000042	0.0011	0.633373	2.022361	1.593586	-1.915587	-1.50945	6.4554	0.336838	0.069548	6.0671	-5.746761	-4.585899
2.07	-0.0007	0.0273	10.1753	0.0339	-0.0378	0.000039	0.0014	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	0.304184	0.052573	5.6300	-4.748072	-3.788948
2.08	-0.0003	0.0269	10.0296	0.0328	-0.0427	0.000035	0.0018	-0.165579	1.828099	1.440511	-1.64927	-1.299597	5.8353	0.286972	0.071726	5.4843	-4.94781	-3.948338
2.09	0.0013	0.0269	10.0296	0.0316	-0.0475	0.000032	0.0023	0.633373	1.828099	1.440511	-1.915587	-1.50945	5.8353	0.2765	0.117733	5.4843	-5.746761	-4.585899
2.1	0.0001	0.0285	10.6124	0.0303	-0.0521	0.000028	0.0027	0.034159	2.022361	1.593586	-1.715849	-1.35206	6.4554	0.29309	0.07982	6.0671	-5.147548	-4.107728
2.11	-0.0007	0.0277	10.3210	0.0288	-0.0565	0.000024	0.0032	-0.365317	1.92523	1.517049	-1.582691	-1.247133	6.1453	0.265734	0.073799	5.7757	-4.748072	-3.788948
2.12	0.0021	0.0320	11.9237	0.0273	-0.0607	0.000020	0.0037	1.032849	2.459452	1.938007	-2.048746	-1.614377	7.8505	0.321168	0.106141	7.3784	-6.146237	-4.90468
2.13	0.0001	0.0277	10.3210	0.0256	-0.0646	0.000017	0.0042	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	0.236086	0.110217	5.7757	-5.147548	-4.107728
2.14	-0.0015	0.0281	10.4667	0.0238	-0.0683	0.000014	0.0047	-0.764792	1.973796	1.555317	-1.449532	-1.142206	6.3003	0.22538	0.055984	5.9214	-4.348596	-3.470167
2.15	0.0013	0.0238	8.8641	0.0220	-0.0717	0.000011	0.0051	0.633373	1.439573	1.134359	-1.915587	-1.50945	4.5951	0.151578	0.227589	4.3187	-5.746761	-4.585899
2.16	-0.0007	0.0257	9.5925	0.0200	-0.0749	0.000008	0.0056	-0.365317	1.682401	1.325704	-1.582691	-1.247133	5.3702	0.161487	0.130256	5.0472	-4.748072	-3.788948
2.17	0.0005	0.0285	10.6124	0.0180	-0.0777	0.000006	0.0060	0.233897	2.022361	1.593586	-1.782428	-1.404523	6.4554	0.174529	0.134519	6.0671	-5.347285	-4.267119
2.18	-0.0003	0.0273	10.1753	0.0159	-0.0802	0.000004	0.0064	-0.165579	1.876664	1.478779	-1.64927	-1.299597	5.9903	0.143138	0.127748	5.6300	-4.94781	-3.948338
2.19	-0.0007	0.0285	10.6124	0.0138	-0.0824	0.000003	0.0068	-0.365317	2.022361	1.593586	-1.582691	-1.247133	6.4554	0.133364	0.09333	6.0671	-4.748072	-3.788948
2.2	-0.0003	0.0288	10.7581	0.0116	-0.0843	0.000002	0.0071	-0.165579	2.070927	1.631855	-1.64927	-1.299597	6.6104	0.114639	0.104986	6.2128	-4.94781	-3.948338
2.21	0.0001	0.0265	9.8839	0.0093	-0.0859	0.000001	0.0074	0.034159	1.779533	1.402242	-1.715849	-1.35206	5.6802	0.079277	0.168817	5.3386	-5.147548	-4.107728
2.22	0.0009	0.0285	10.6124	0.0070	-0.0871	0.000000	0.0076	0.433635	2.022361	1.593586	-1.849008	-1.456987	6.4554	0.067884	0.168184	6.0671	-5.547023	-4.426509
2.23	0.0009	0.0288	10.7581	0.0047	-0.0880	0.000000	0.0077	0.433635	2.070927	1.631855	-1.849008	-1.456987	6.6104	0.046496	0.162228	6.2128	-5.547023	-4.426509
2.24	-0.0019	0.0245	9.1555	0.0023	-0.0885	0.000000	0.0078	-0.96453	1.536705	1.210897	-1.382953	-1.089743	4.9051	0.017285	0.123996	4.6101	-4.148858	-3.310777
2.25	-0.0003	0.0281	10.4667	0.0000	-0.0887	0.000000	0.0079	-0.165579	1.973796	1.555317	-1.64927	-1.299597	6.3003	8.99E-15	0.125787	5.9214	-4.94781	-3.948338
2.26	0.0005	0.0273	10.1753	-0.0023	-0.0885	0.000000	0.0078	0.233897	1.876664	1.478779	-1.782428	-1.404523	5.9903	-0.021109	0.176256	5.6300	-5.347285	-4.267119
2.27	0.0017	0.0257	9.5925	-0.0047	-0.0880	0.000000	0.0077	0.833111	1.682401	1.325704	-1.982166	-1.561913	5.3702	-0.037773	0.258475	5.0472	-5.946499	-4.74529
2.28	-0.0007	0.0269	10.0296	-0.0070	-0.0871	0.000000	0.0076	-0.365317	1.828099	1.440511	-1.582691	-1.247133	5.8353	-0.061364	0.128851	5.4843	-4.748072	-3.788948
2.29	0.0001	0.0281	10.4667	-0.0093	-0.0859	-0.000001	0.0074	0.034159	1.973796	1.555317	-1.715849	-1.35206	6.3003	-0.087932	0.138989	5.9214	-5.147548	-4.107728
2.3	-0.0003	0.0285	10.6124	-0.0116	-0.0843	-0.000002	0.0071	-0.165579	2.022361	1.593586	-1.64927	-1.299597	6.4554	-0.11195	0.112308	6.0671	-4.94781	-3.948338
2.31	-0.0015	0.0257	9.5925	-0.0138	-0.0824	-0.000003	0.0068	-0.764792	1.682401	1.325704	-1.449532	-1.142206	5.3702	-0.110945	0.110507	5.0472	-4.348596	-3.470167
2.32	-0.0003	0.0285	10.6124	-0.0159	-0.0802	-0.000004	0.0064	-0.165579	2.022361	1.593586	-1.64927	-1.299597	6.4554	-0.154251	0.106849	6.0671	-4.94781	-3.948338

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7.6	0.0009	0.0265	9.8839	-0.0303	0.0521	-0.000028	0.0027	0.433635	1.779533	1.402242	-1.849008	-1.456987	5.6802	-0.257898	-0.123266	5.3386	-5.547023	-4.426509
7.61	-0.0007	0.0273	10.1753	-0.0288	0.0565	-0.000024	0.0032	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	-0.259031	-0.078706	5.6300	-4.748072	-3.788948
7.62	-0.0015	0.0245	9.1555	-0.0273	0.0607	-0.000020	0.0037	-0.764792	1.536705	1.210897	-1.449532	-1.142206	4.9051	-0.200671	-0.097172	4.6101	-4.348596	-3.470167
7.63	0.0001	0.0253	9.4468	-0.0256	0.0646	-0.000017	0.0042	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	-0.200353	-0.143891	4.9015	-5.147548	-4.107728
7.64	0.0009	0.0312	11.6323	-0.0238	0.0683	-0.000014	0.0047	0.433635	2.362321	1.861469	-1.849008	-1.456987	7.5405	-0.269744	-0.090399	7.0870	-5.547023	-4.426509
7.65	-0.0011	0.0261	9.7382	-0.0220	0.0717	-0.000011	0.0051	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	-0.18226	-0.104253	5.1929	-4.548334	-3.629557
7.66	-0.0007	0.0273	10.1753	-0.0200	0.0749	-0.000008	0.0056	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	-0.180134	-0.104254	5.6300	-4.748072	-3.788948
7.67	0.0001	0.0269	10.0296	-0.0180	0.0777	-0.000006	0.0060	0.034159	1.828099	1.440511	-1.715849	-1.35206	5.8353	-0.157764	-0.145987	5.4843	-5.147548	-4.107728
7.68	-0.0011	0.0245	9.1555	-0.0159	0.0802	-0.000004	0.0064	-0.565055	1.536705	1.210897	-1.516111	-1.19467	4.9051	-0.117209	-0.144465	4.6101	-4.548334	-3.629557
7.69	-0.0007	0.0285	10.6124	-0.0138	0.0824	-0.000003	0.0068	-0.365317	2.022361	1.593586	-1.582691	-1.247133	6.4554	-0.133364	-0.09333	6.0671	-4.748072	-3.788948
7.7	0.0005	0.0249	9.3012	-0.0116	0.0843	-0.000002	0.0071	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	-0.087755	-0.211894	4.7558	-5.347285	-4.267119
7.71	0.0001	0.0285	10.6124	-0.0093	0.0859	-0.000001	0.0074	0.034159	2.022361	1.593586	-1.715849	-1.35206	6.4554	-0.090095	-0.131531	6.0671	-5.147548	-4.107728
7.72	0.0009	0.0273	10.1753	-0.0070	0.0871	0.000000	0.0076	0.433635	1.876664	1.478779	-1.849008	-1.456987	5.9903	-0.062994	-0.190872	5.6300	-5.547023	-4.426509
7.73	0.0025	0.0288	10.7581	-0.0047	0.0880	0.000000	0.0077	1.232587	2.070927	1.631855	-2.115325	-1.66684	6.6104	-0.046496	-0.232508	6.2128	-6.345975	-5.06407
7.74	0.0001	0.0273	10.1753	-0.0023	0.0885	0.000000	0.0078	0.034159	1.876664	1.478779	-1.715849	-1.35206	5.9903	-0.021109	-0.158581	5.6300	-5.147548	-4.107728
7.75	-0.0011	0.0242	9.0098	0.0000	0.0887	0.000000	0.0079	-0.565055	1.488139	1.172628	-1.516111	-1.19467	4.7501	-2.04E-13	-0.167359	4.4644	-4.548334	-3.629557
7.76	0.0005	0.0249	9.3012	0.0023	0.0885	0.000000	0.0078	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	0.017831	-0.222359	4.7558	-5.347285	-4.267119
7.77	0.0013	0.0265	9.8839	0.0047	0.0880	0.000000	0.0077	0.633373	1.779533	1.402242	-1.915587	-1.50945	5.6802	0.039954	-0.225628	5.3386	-5.746761	-4.585899
7.78	-0.0007	0.0300	11.1952	0.0070	0.0871	0.000000	0.0076	-0.365317	2.216624	1.746662	-1.582691	-1.247133	7.0754	0.074405	-0.06835	6.6499	-4.748072	-3.788948
7.79	-0.0003	0.0265	9.8839	0.0093	0.0859	0.000001	0.0074	-0.165579	1.779533	1.402242	-1.64927	-1.299597	5.6802	0.079277	-0.151664	5.3386	-4.94781	-3.948338
7.8	-0.0011	0.0269	10.0296	0.0116	0.0843	0.000002	0.0071	-0.565055	1.828099	1.440511	-1.516111	-1.19467	5.8353	0.101197	-0.107912	5.4843	-4.548334	-3.629557
7.81	0.0013	0.0269	10.0296	0.0138	0.0824	0.000003	0.0068	0.633373	1.828099	1.440511	-1.915587	-1.50945	5.8353	0.120553	-0.204293	5.4843	-5.746761	-4.585899
7.82	0.0001	0.0249	9.3012	0.0159	0.0802	0.000004	0.0064	0.034159	1.58527	1.249166	-1.715849	-1.35206	5.0602	0.120913	-0.185571	4.7558	-5.147548	-4.107728
7.83	0.0005	0.0249	9.3012	0.0180	0.0777	0.000006	0.0060	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	0.136808	-0.19524	4.7558	-5.347285	-4.267119
7.84	-0.0007	0.0253	9.4468	0.0200	0.0749	0.000008	0.0056	-0.365317	1.633836	1.287435	-1.582691	-1.247133	5.2152	0.156826	-0.136757	4.9015	-4.748072	-3.788948
7.85	0.0001	0.0273	10.1753	0.0220	0.0717	0.000011	0.0051	0.034159	1.876664	1.478779	-1.715849	-1.35206	5.9903	0.197601	-0.128549	5.6300	-5.147548	-4.107728
7.86	0.0009	0.0253	9.4468	0.0238	0.0683	0.000014	0.0047	0.433635	1.633836	1.287435	-1.849008	-1.456987	5.2152	0.186561	-0.179383	4.9015	-5.547023	-4.426509
7.87	-0.0007	0.0277	10.3210	0.0256	0.0646	0.000017	0.0042	-0.365317	1.92523	1.517049	-1.582691	-1.247133	6.1453	0.236086	-0.084398	5.7757	-4.748072	-3.788948
7.88	0.0009	0.0265	9.8839	0.0273	0.0607	0.000020	0.0037	0.433635	1.779533	1.402242	-1.849008	-1.456987	5.6802	0.23238	-0.143558	5.3386	-5.547023	-4.426509
7.89	-0.0003	0.0253	9.4468	0.0288	0.0565	0.000024	0.0032	-0.165579	1.633836	1.287435	-1.64927	-1.299597	5.2152	0.225514	-0.114533	4.9015	-4.94781	-3.948338
7.9	0.0009	0.0242	9.0098	0.0303	0.0521	0.000028	0.0027	0.433635	1.488139	1.172628	-1.849008	-1.456987	4.7501	0.215668	-0.150418	4.4644	-5.547023	-4.426509
7.91	0.0001	0.0269	10.0296	0.0316	0.0475	0.000032	0.0023	0.034159	1.828099	1.440511	-1.715849	-1.35206	5.8353	0.2765	-0.089266	5.4843	-5.147548	-4.107728
7.92	-0.0031	0.0238	8.8641	0.0328	0.0427	0.000035	0.0018	-1.563744	1.439573	1.134359	-1.183215	-0.932353	4.5951	0.225982	-0.041677	4.3187	-3.549644	-2.832606
7.93	-0.0015	0.0257	9.5925	0.0339	0.0378	0.000039	0.0014	-0.764792	1.682401	1.325704	-1.449532	-1.142206	5.3702	0.272696	-0.050605	5.0472	-4.348596	-3.470167

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8.11	0.0013	0.0253	9.4468	0.0288	-0.0565	0.000024	0.0032	0.633373	1.633836	1.287435	-1.915587	-1.50945	5.2152	0.225514	0.159687	4.9015	-5.746761	-4.585899
8.12	0.0005	0.0281	10.4667	0.0273	-0.0607	0.000020	0.0037	0.233897	1.973796	1.555317	-1.782428	-1.404523	6.3003	0.257748	0.110353	5.9214	-5.347285	-4.267119
8.13	0.0005	0.0261	9.7382	0.0256	-0.0646	0.000017	0.0042	0.233897	1.730967	1.363973	-1.782428	-1.404523	5.5252	0.212264	0.145576	5.1929	-5.347285	-4.267119
8.14	-0.0011	0.0273	10.1753	0.0238	-0.0683	0.000014	0.0047	-0.565055	1.876664	1.478779	-1.516111	-1.19467	5.9903	0.214289	0.081494	5.6300	-4.548334	-3.629557
8.15	-0.0007	0.0265	9.8839	0.0220	-0.0717	0.000011	0.0051	-0.365317	1.779533	1.402242	-1.582691	-1.247133	5.6802	0.187374	0.112351	5.3386	-4.748072	-3.788948
8.16	0.0001	0.0265	9.8839	0.0200	-0.0749	0.000008	0.0056	0.034159	1.779533	1.402242	-1.715849	-1.35206	5.6802	0.170811	0.147161	5.3386	-5.147548	-4.107728
8.17	0.0001	0.0269	10.0296	0.0180	-0.0777	0.000006	0.0060	0.034159	1.828099	1.440511	-1.715849	-1.35206	5.8353	0.157764	0.145987	5.4843	-5.147548	-4.107728
8.18	-0.0023	0.0277	10.3210	0.0159	-0.0802	0.000004	0.0064	-1.164268	1.92523	1.517049	-1.316373	-1.03728	6.1453	0.146842	0.040662	5.7757	-3.94912	-3.151386
8.19	0.0001	0.0288	10.7581	0.0138	-0.0824	0.000003	0.0068	0.034159	2.070927	1.631855	-1.715849	-1.35206	6.6104	0.136566	0.119103	6.2128	-5.147548	-4.107728
8.2	-0.0011	0.0257	9.5925	0.0116	-0.0843	0.000002	0.0071	-0.565055	1.682401	1.325704	-1.516111	-1.19467	5.3702	0.093131	0.129879	5.0472	-4.548334	-3.629557
8.21	0.0001	0.0249	9.3012	0.0093	-0.0859	0.000001	0.0074	0.034159	1.58527	1.249166	-1.715849	-1.35206	5.0602	0.070623	0.198646	4.7558	-5.147548	-4.107728
8.22	0.0009	0.0245	9.1555	0.0070	-0.0871	0.000000	0.0076	0.433635	1.536705	1.210897	-1.849008	-1.456987	4.9051	0.051582	0.243811	4.6101	-5.547023	-4.426509
8.23	-0.0007	0.0273	10.1753	0.0047	-0.0880	0.000000	0.0077	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	0.042134	0.122502	5.6300	-4.748072	-3.788948
8.24	-0.0003	0.0273	10.1753	0.0023	-0.0885	0.000000	0.0078	-0.165579	1.876664	1.478779	-1.64927	-1.299597	5.9903	0.021109	0.140907	5.6300	-4.94781	-3.948338
8.25	-0.0011	0.0292	10.9038	0.0000	-0.0887	0.000000	0.0079	-0.565055	2.119493	1.670124	-1.516111	-1.19467	6.7654	3.13E-13	0.067271	6.3585	-4.548334	-3.629557
8.26	-0.0007	0.0273	10.1753	-0.0023	-0.0885	0.000000	0.0078	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	-0.021109	0.123232	5.6300	-4.748072	-3.788948
8.27	0.0013	0.0277	10.3210	-0.0047	-0.0880	0.000000	0.0077	0.633373	1.92523	1.517049	-1.915587	-1.50945	6.1453	-0.043225	0.202713	5.7757	-5.746761	-4.585899
8.28	0.0001	0.0253	9.4468	-0.0070	-0.0871	0.000000	0.0076	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	-0.054843	0.193894	4.9015	-5.147548	-4.107728
8.29	0.0005	0.0242	9.0098	-0.0093	-0.0859	-0.000001	0.0074	0.233897	1.488139	1.172628	-1.782428	-1.404523	4.7501	-0.066296	0.230714	4.4644	-5.347285	-4.267119
8.3	0.0001	0.0269	10.0296	-0.0116	-0.0843	-0.000002	0.0071	0.034159	1.828099	1.440511	-1.715849	-1.35206	5.8353	-0.101197	0.15844	5.4843	-5.147548	-4.107728
8.31	-0.0003	0.0257	9.5925	-0.0138	-0.0824	-0.000003	0.0068	-0.165579	1.682401	1.325704	-1.64927	-1.299597	5.3702	-0.110945	0.159905	5.0472	-4.94781	-3.948338
8.32	-0.0011	0.0257	9.5925	-0.0159	-0.0802	-0.000004	0.0064	-0.565055	1.682401	1.325704	-1.516111	-1.19467	5.3702	-0.128321	0.123566	5.0472	-4.548334	-3.629557
8.33	-0.0007	0.0273	10.1753	-0.0180	-0.0777	-0.000006	0.0060	-0.365317	1.876664	1.478779	-1.582691	-1.247133	5.9903	-0.161956	0.108203	5.6300	-4.748072	-3.788948
8.34	0.0005	0.0269	10.0296	-0.0200	-0.0749	-0.000008	0.0056	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	-0.175472	0.155613	5.4843	-5.347285	-4.267119
8.35	-0.0003	0.0285	10.6124	-0.0220	-0.0717	-0.000011	0.0051	-0.165579	2.022361	1.593586	-1.64927	-1.299597	6.4554	-0.212942	0.095535	6.0671	-4.94781	-3.948338
8.36	-0.0039	0.0335	12.5065	-0.0238	-0.0683	-0.000014	0.0047	-1.96322	2.653715	2.091083	-1.050056	-0.827426	8.4706	-0.303017	-0.10894	7.9611	-3.150168	-2.513825
8.37	0.0009	0.0249	9.3012	-0.0256	-0.0646	-0.000017	0.0042	0.433635	1.58527	1.249166	-1.849008	-1.456987	5.0602	-0.194398	0.175323	4.7558	-5.547023	-4.426509
8.38	0.0013	0.0300	11.1952	-0.0273	-0.0607	-0.000020	0.0037	0.633373	2.216624	1.746662	-1.915587	-1.50945	7.0754	-0.289458	0.108247	6.6499	-5.746761	-4.585899
8.39	-0.0015	0.0261	9.7382	-0.0288	-0.0565	-0.000024	0.0032	-0.764792	1.730967	1.363973	-1.449532	-1.142206	5.5252	-0.23892	0.070852	5.1929	-4.348596	-3.470167
8.4	-0.0003	0.0265	9.8839	-0.0303	-0.0521	-0.000028	0.0027	-0.165579	1.779533	1.402242	-1.64927	-1.299597	5.6802	-0.257898	0.092038	5.3386	-4.94781	-3.948338
8.41	0.0005	0.0288	10.7581	-0.0316	-0.0475	-0.000032	0.0023	0.233897	2.070927	1.631855	-1.782428	-1.404523	6.6104	-0.313228	0.078128	6.2128	-5.347285	-4.267119
8.42	-0.0007	0.0281	10.4667	-0.0328	-0.0427	-0.000035	0.0018	-0.365317	1.973796	1.555317	-1.582691	-1.247133	6.3003	-0.309844	0.052067	5.9214	-4.748072	-3.788948
8.43	-0.0007	0.0261	9.7382	-0.0339	-0.0378	-0.000039	0.0014	-0.365317	1.730967	1.363973	-1.582691	-1.247133	5.5252	-0.280568	0.062408	5.1929	-4.748072	-3.788948
8.44	-0.0007	0.0281	10.4667	-0.0348	-0.0326	-0.000042	0.0011	-0.365317	1.973796	1.555317	-1.582691	-1.247133	6.3003	-0.328749	0.039786	5.9214	-4.748072	-3.788948

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8.62	0.0001	0.0269	10.0296	-0.0273	0.0607	-0.000020	0.0037	0.034159	1.828099	1.440511	-1.715849	-1.35206	5.8353	-0.238722	-0.114041	5.4843	-5.147548	-4.107728
8.63	0.0005	0.0269	10.0296	-0.0256	0.0646	-0.000017	0.0042	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	-0.224175	-0.134352	5.4843	-5.347285	-4.267119
8.64	-0.0003	0.0257	9.5925	-0.0238	0.0683	-0.000014	0.0047	-0.165579	1.682401	1.325704	-1.64927	-1.299597	5.3702	-0.192107	-0.132514	5.0472	-4.94781	-3.948338
8.65	0.0009	0.0285	10.6124	-0.0220	0.0717	-0.000011	0.0051	0.433635	2.022361	1.593586	-1.849008	-1.456987	6.4554	-0.212942	-0.138517	6.0671	-5.547023	-4.426509
8.66	0.0005	0.0261	9.7382	-0.0200	0.0749	-0.000008	0.0056	0.233897	1.730967	1.363973	-1.782428	-1.404523	5.5252	-0.166149	-0.168614	5.1929	-5.347285	-4.267119
8.67	0.0001	0.0304	11.3409	-0.0180	0.0777	-0.000006	0.0060	0.034159	2.26519	1.784931	-1.715849	-1.35206	7.2305	-0.195485	-0.085267	6.7956	-5.147548	-4.107728
8.68	0.0001	0.0285	10.6124	-0.0159	0.0802	-0.000004	0.0064	0.034159	2.022361	1.593586	-1.715849	-1.35206	6.4554	-0.154251	-0.122873	6.0671	-5.147548	-4.107728
8.69	-0.0003	0.0296	11.0495	-0.0138	0.0824	-0.000003	0.0068	-0.165579	2.168058	1.708393	-1.64927	-1.299597	6.9204	-0.142972	-0.08832	6.5042	-4.94781	-3.948338
8.7	-0.0003	0.0288	10.7581	-0.0116	0.0843	-0.000002	0.0071	-0.165579	2.070927	1.631855	-1.64927	-1.299597	6.6104	-0.114639	-0.104986	6.2128	-4.94781	-3.948338
8.71	0.0001	0.0277	10.3210	-0.0093	0.0859	-0.000001	0.0074	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	-0.085768	-0.146446	5.7757	-5.147548	-4.107728
8.72	0.0005	0.0257	9.5925	-0.0070	0.0871	0.000000	0.0076	0.233897	1.682401	1.325704	-1.782428	-1.404523	5.3702	-0.056473	-0.203727	5.0472	-5.347285	-4.267119
8.73	-0.0011	0.0281	10.4667	-0.0047	0.0880	0.000000	0.0077	-0.565055	1.973796	1.555317	-1.516111	-1.19467	6.3003	-0.044315	-0.089656	5.9214	-4.548334	-3.629557
8.74	-0.0007	0.0257	9.5925	-0.0023	0.0885	0.000000	0.0078	-0.365317	1.682401	1.325704	-1.582691	-1.247133	5.3702	-0.018924	-0.153968	5.0472	-4.748072	-3.788948
8.75	-0.0007	0.0281	10.4667	0.0000	0.0887	0.000000	0.0079	-0.365317	1.973796	1.555317	-1.582691	-1.247133	6.3003	-3.15E-13	-0.108078	5.9214	-4.748072	-3.788948
8.76	0.0025	0.0230	8.5727	0.0023	0.0885	0.000000	0.0078	1.232587	1.342442	1.057821	-2.115325	-1.66684	4.2851	0.0151	-0.349152	4.0273	-6.345975	-5.06407
8.77	-0.0007	0.0281	10.4667	0.0047	0.0880	0.000000	0.0077	-0.365317	1.973796	1.555317	-1.582691	-1.247133	6.3003	0.044315	-0.107225	5.9214	-4.748072	-3.788948
8.78	0.0005	0.0242	9.0098	0.0070	0.0871	0.000000	0.0076	0.233897	1.488139	1.172628	-1.782428	-1.404523	4.7501	0.049952	-0.233978	4.4644	-5.347285	-4.267119
8.79	0.0005	0.0265	9.8839	0.0093	0.0859	0.000001	0.0074	0.233897	1.779533	1.402242	-1.782428	-1.404523	5.6802	0.079277	-0.185971	5.3386	-5.347285	-4.267119
8.8	0.0005	0.0281	10.4667	0.0116	0.0843	0.000002	0.0071	0.233897	1.973796	1.555317	-1.782428	-1.404523	6.3003	0.109262	-0.153316	5.9214	-5.347285	-4.267119
8.81	0.0005	0.0269	10.0296	0.0138	0.0824	0.000003	0.0068	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	0.120553	-0.171361	5.4843	-5.347285	-4.267119
8.82	0.0017	0.0249	9.3012	0.0159	0.0802	0.000004	0.0064	0.833111	1.58527	1.249166	-1.982166	-1.561913	5.0602	0.120913	-0.249667	4.7558	-5.946499	-4.74529
8.83	-0.0011	0.0261	9.7382	0.0180	0.0777	0.000006	0.0060	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	0.149382	-0.112924	5.1929	-4.548334	-3.629557
8.84	0.0005	0.0288	10.7581	0.0200	0.0749	0.000008	0.0056	0.233897	2.070927	1.631855	-1.782428	-1.404523	6.6104	0.19878	-0.12311	6.2128	-5.347285	-4.267119
8.85	0.0029	0.0249	9.3012	0.0220	0.0717	0.000011	0.0051	1.432325	1.58527	1.249166	-2.181904	-1.719304	5.0602	0.166919	-0.266212	4.7558	-6.545713	-5.22346
8.86	-0.0007	0.0218	8.1356	0.0238	0.0683	0.000014	0.0047	-0.365317	1.196745	0.943014	-1.582691	-1.247133	3.8200	0.136651	-0.178191	3.5902	-4.748072	-3.788948
8.87	0.0001	0.0253	9.4468	0.0256	0.0646	0.000017	0.0042	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	0.200353	-0.143891	4.9015	-5.147548	-4.107728
8.88	0.0005	0.0277	10.3210	0.0273	0.0607	0.000020	0.0037	0.233897	1.92523	1.517049	-1.782428	-1.404523	6.1453	0.251406	-0.115624	5.7757	-5.347285	-4.267119
8.89	0.0001	0.0277	10.3210	0.0288	0.0565	0.000024	0.0032	0.034159	1.92523	1.517049	-1.715849	-1.35206	6.1453	0.265734	-0.096376	5.7757	-5.147548	-4.107728
8.9	0.0009	0.0308	11.4866	0.0303	0.0521	0.000028	0.0027	0.433635	2.313756	1.8232	-1.849008	-1.456987	7.3855	0.33532	-0.073486	6.9413	-5.547023	-4.426509
8.91	-0.0015	0.0273	10.1753	0.0316	0.0475	0.000032	0.0023	-0.764792	1.876664	1.478779	-1.449532	-1.142206	5.9903	0.283846	-0.047183	5.6300	-4.348596	-3.470167
8.92	-0.0019	0.0265	9.8839	0.0328	0.0427	0.000035	0.0018	-0.96453	1.779533	1.402242	-1.382953	-1.089743	5.6802	0.279349	-0.041308	5.3386	-4.148858	-3.310777
8.93	-0.0011	0.0269	10.0296	0.0339	0.0378	0.000039	0.0014	-0.565055	1.828099	1.440511	-1.516111	-1.19467	5.8353	0.296312	-0.048311	5.4843	-4.548334	-3.629557
8.94	-0.0011	0.0265	9.8839	0.0348	0.0326	0.000042	0.0011	-0.565055	1.779533	1.402242	-1.516111	-1.19467	5.6802	0.296394	-0.044604	5.3386	-4.548334	-3.629557

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9.13	-0.0011	0.0277	10.3210	0.0256	-0.0646	0.000017	0.0042	-0.565055	1.92523	1.517049	-1.516111	-1.19467	6.1453	0.236086	0.071488	5.7757	-4.548334	-3.629557
9.14	-0.0003	0.0261	9.7382	0.0238	-0.0683	0.000014	0.0047	-0.165579	1.730967	1.363973	-1.64927	-1.299597	5.5252	0.197652	0.126582	5.1929	-4.94781	-3.948338
9.15	-0.0011	0.0285	10.6124	0.0220	-0.0717	0.000011	0.0051	-0.565055	2.022361	1.593586	-1.516111	-1.19467	6.4554	0.212942	0.066881	6.0671	-4.548334	-3.629557
9.16	-0.0003	0.0269	10.0296	0.0200	-0.0749	0.000008	0.0056	-0.165579	1.828099	1.440511	-1.64927	-1.299597	5.8353	0.175472	0.125707	5.4843	-4.94781	-3.948338
9.17	-0.0023	0.0265	9.8839	0.0180	-0.0777	0.000006	0.0060	-1.164268	1.779533	1.402242	-1.316373	-1.03728	5.6802	0.153573	0.05962	5.3386	-3.94912	-3.151386
9.18	0.0021	0.0324	12.0694	0.0159	-0.0802	0.000004	0.0064	1.032849	2.508018	1.976276	-2.048746	-1.614377	8.0056	0.191293	0.13333	7.5241	-6.146237	-4.90468
9.19	-0.0007	0.0253	9.4468	0.0138	-0.0824	0.000003	0.0068	-0.365317	1.633836	1.287435	-1.582691	-1.247133	5.2152	0.107743	0.150597	4.9015	-4.748072	-3.788948
9.2	-0.0015	0.0234	8.7184	0.0116	-0.0843	0.000002	0.0071	-0.764792	1.391007	1.09609	-1.449532	-1.142206	4.4401	0.077001	0.15697	4.1730	-4.348596	-3.470167
9.21	-0.0003	0.0230	8.5727	0.0093	-0.0859	0.000001	0.0074	-0.165579	1.342442	1.057821	-1.64927	-1.299597	4.2851	0.059805	0.218779	4.0273	-4.94781	-3.948338
9.22	0.0001	0.0257	9.5925	0.0070	-0.0871	0.000000	0.0076	0.034159	1.682401	1.325704	-1.715849	-1.35206	5.3702	0.056473	0.186331	5.0472	-5.147548	-4.107728
9.23	-0.0011	0.0273	10.1753	0.0047	-0.0880	0.000000	0.0077	-0.565055	1.876664	1.478779	-1.516111	-1.19467	5.9903	0.042134	0.104932	5.6300	-4.548334	-3.629557
9.24	0.0001	0.0281	10.4667	0.0023	-0.0885	0.000000	0.0078	0.034159	1.973796	1.555317	-1.715849	-1.35206	6.3003	0.022201	0.143214	5.9214	-5.147548	-4.107728
9.25	0.0001	0.0253	9.4468	0.0000	-0.0887	0.000000	0.0079	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	2.81E-13	0.19739	4.9015	-5.147548	-4.107728
9.26	0.0013	0.0273	10.1753	-0.0023	-0.0885	0.000000	0.0078	0.633373	1.876664	1.478779	-1.915587	-1.50945	5.9903	-0.021109	0.211605	5.6300	-5.746761	-4.585899
9.27	-0.0011	0.0253	9.4468	-0.0047	-0.0880	0.000000	0.0077	-0.565055	1.633836	1.287435	-1.516111	-1.19467	5.2152	-0.036683	0.143124	4.9015	-4.548334	-3.629557
9.28	-0.0019	0.0277	10.3210	-0.0070	-0.0871	0.000000	0.0076	-0.96453	1.92523	1.517049	-1.382953	-1.089743	6.1453	-0.064624	0.061538	5.7757	-4.148858	-3.310777
9.29	0.0017	0.0312	11.6323	-0.0093	-0.0859	-0.000001	0.0074	0.833111	2.362321	1.861469	-1.982166	-1.561913	7.5405	-0.10524	0.147943	7.0870	-5.946499	-4.74529
9.3	0.0021	0.0261	9.7382	-0.0116	-0.0843	-0.000002	0.0071	1.032849	1.730967	1.363973	-2.048746	-1.614377	5.5252	-0.09582	0.257299	5.1929	-6.146237	-4.90468
9.31	0.0025	0.0242	9.0098	-0.0138	-0.0824	-0.000003	0.0068	1.232587	1.488139	1.172628	-2.115325	-1.66684	4.7501	-0.098135	0.3038	4.4644	-6.345975	-5.06407
9.32	-0.0023	0.0269	10.0296	-0.0159	-0.0802	-0.000004	0.0064	-1.164268	1.828099	1.440511	-1.316373	-1.03728	5.8353	-0.139434	0.054594	5.4843	-3.94912	-3.151386
9.33	0.0009	0.0261	9.7382	-0.0180	-0.0777	-0.000006	0.0060	0.433635	1.730967	1.363973	-1.849008	-1.456987	5.5252	-0.149382	0.190519	5.1929	-5.547023	-4.426509
9.34	0.0001	0.0288	10.7581	-0.0200	-0.0749	-0.000008	0.0056	0.034159	2.070927	1.631855	-1.715849	-1.35206	6.6104	-0.19878	0.108157	6.2128	-5.147548	-4.107728
9.35	0.0005	0.0269	10.0296	-0.0220	-0.0717	-0.000011	0.0051	0.233897	1.828099	1.440511	-1.782428	-1.404523	5.8353	-0.192488	0.149105	5.4843	-5.347285	-4.267119
9.36	0.0001	0.0285	10.6124	-0.0238	-0.0683	-0.000014	0.0047	0.034159	2.022361	1.593586	-1.715849	-1.35206	6.4554	-0.230925	0.104634	6.0671	-5.147548	-4.107728
9.37	0.0001	0.0292	10.9038	-0.0256	-0.0646	-0.000017	0.0042	0.034159	2.119493	1.670124	-1.715849	-1.35206	6.7654	-0.259908	0.087767	6.3585	-5.147548	-4.107728
9.38	-0.0019	0.0249	9.3012	-0.0273	-0.0607	-0.000020	0.0037	-0.96453	1.58527	1.249166	-1.382953	-1.089743	5.0602	-0.207012	0.079778	4.7558	-4.148858	-3.310777
9.39	0.0001	0.0249	9.3012	-0.0288	-0.0565	-0.000024	0.0032	0.034159	1.58527	1.249166	-1.715849	-1.35206	5.0602	-0.21881	0.130729	4.7558	-5.147548	-4.107728
9.4	-0.0015	0.0277	10.3210	-0.0303	-0.0521	-0.000028	0.0027	-0.764792	1.92523	1.517049	-1.449532	-1.142206	6.1453	-0.279013	0.047233	5.7757	-4.348596	-3.470167
9.41	0.0009	0.0257	9.5925	-0.0316	-0.0475	-0.000032	0.0023	0.433635	1.682401	1.325704	-1.849008	-1.456987	5.3702	-0.254463	0.12062	5.0472	-5.547023	-4.426509
9.42	-0.0011	0.0261	9.7382	-0.0328	-0.0427	-0.000035	0.0018	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	-0.271725	0.06208	5.1929	-4.548334	-3.629557
9.43	0.0001	0.0296	11.0495	-0.0339	-0.0378	-0.000039	0.0014	0.034159	2.168058	1.708393	-1.715849	-1.35206	6.9204	-0.351415	0.047985	6.5042	-5.147548	-4.107728
9.44	0.0017	0.0253	9.4468	-0.0348	-0.0326	-0.000042	0.0011	0.833111	1.633836	1.287435	-1.982166	-1.561913	5.2152	-0.272127	0.098742	4.9015	-5.946499	-4.74529

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9.64	-0.0003	0.0257	9.5925	-0.0238	0.0683	-0.000014	0.0047	-0.165579	1.682401	1.325704	-1.64927	-1.299597	5.3702	-0.192107	-0.132514	5.0472	-4.94781	-3.948338
9.65	-0.0011	0.0304	11.3409	-0.0220	0.0717	-0.000011	0.0051	-0.565055	2.26519	1.784931	-1.516111	-1.19467	7.2305	-0.238511	-0.035737	6.7956	-4.548334	-3.629557
9.66	0.0001	0.0242	9.0098	-0.0200	0.0749	-0.000008	0.0056	0.034159	1.488139	1.172628	-1.715849	-1.35206	4.7501	-0.142841	-0.186164	4.4644	-5.147548	-4.107728
9.67	-0.0007	0.0269	10.0296	-0.0180	0.0777	-0.000006	0.0060	-0.365317	1.828099	1.440511	-1.582691	-1.247133	5.8353	-0.157764	-0.114949	5.4843	-4.748072	-3.788948
9.68	0.0005	0.0257	9.5925	-0.0159	0.0802	-0.000004	0.0064	0.233897	1.682401	1.325704	-1.782428	-1.404523	5.3702	-0.128321	-0.187662	5.0472	-5.347285	-4.267119
9.69	-0.0007	0.0265	9.8839	-0.0138	0.0824	-0.000003	0.0068	-0.365317	1.779533	1.402242	-1.582691	-1.247133	5.6802	-0.117351	-0.129122	5.3386	-4.748072	-3.788948
9.7	0.0009	0.0261	9.7382	-0.0116	0.0843	-0.000002	0.0071	0.433635	1.730967	1.363973	-1.849008	-1.456987	5.5252	-0.09582	-0.20677	5.1929	-5.547023	-4.426509
9.71	0.0001	0.0242	9.0098	-0.0093	0.0859	-0.000001	0.0074	0.034159	1.488139	1.172628	-1.715849	-1.35206	4.7501	-0.066296	-0.213561	4.4644	-5.147548	-4.107728
9.72	-0.0011	0.0257	9.5925	-0.0070	0.0871	0.000000	0.0076	-0.565055	1.682401	1.325704	-1.516111	-1.19467	5.3702	-0.056473	-0.134144	5.0472	-4.548334	-3.629557
9.73	-0.0003	0.0269	10.0296	-0.0047	0.0880	0.000000	0.0077	-0.165579	1.828099	1.440511	-1.64927	-1.299597	5.8353	-0.041044	-0.14771	5.4843	-4.94781	-3.948338
9.74	0.0013	0.0242	9.0098	-0.0023	0.0885	0.000000	0.0078	0.633373	1.488139	1.172628	-1.915587	-1.50945	4.7501	-0.016739	-0.273076	4.4644	-5.746761	-4.585899
9.75	-0.0011	0.0273	10.1753	0.0000	0.0887	0.000000	0.0079	-0.565055	1.876664	1.478779	-1.516111	-1.19467	5.9903	-3.45E-13	-0.105766	5.6300	-4.548334	-3.629557
9.76	-0.0019	0.0242	9.0098	0.0023	0.0885	0.000000	0.0078	-0.96453	1.488139	1.172628	-1.382953	-1.089743	4.7501	0.016739	-0.13168	4.4644	-4.148858	-3.310777
9.77	-0.0015	0.0269	10.0296	0.0047	0.0880	0.000000	0.0077	-0.764792	1.828099	1.440511	-1.449532	-1.142206	5.8353	0.041044	-0.095001	5.4843	-4.348596	-3.470167
9.78	0.0013	0.0269	10.0296	0.0070	0.0871	0.000000	0.0076	0.633373	1.828099	1.440511	-1.915587	-1.50945	5.8353	0.061364	-0.215831	5.4843	-5.746761	-4.585899
9.79	-0.0007	0.0320	11.9237	0.0093	0.0859	0.000001	0.0074	-0.365317	2.459452	1.938007	-1.582691	-1.247133	7.8505	0.109567	-0.03011	7.3784	-4.748072	-3.788948
9.8	-0.0003	0.0285	10.6124	0.0116	0.0843	0.000002	0.0071	-0.165579	2.022361	1.593586	-1.64927	-1.299597	6.4554	0.11195	-0.112308	6.0671	-4.94781	-3.948338
9.81	-0.0007	0.0242	9.0098	0.0138	0.0824	0.000003	0.0068	-0.365317	1.488139	1.172628	-1.582691	-1.247133	4.7501	0.098135	-0.172072	4.4644	-4.748072	-3.788948
9.82	0.0009	0.0273	10.1753	0.0159	0.0802	0.000004	0.0064	0.433635	1.876664	1.478779	-1.849008	-1.456987	5.9903	0.143138	-0.175821	5.6300	-5.547023	-4.426509
9.83	0.0005	0.0273	10.1753	0.0180	0.0777	0.000006	0.0060	0.233897	1.876664	1.478779	-1.782428	-1.404523	5.9903	0.161956	-0.15476	5.6300	-5.347285	-4.267119
9.84	-0.0003	0.0261	9.7382	0.0200	0.0749	0.000008	0.0056	-0.165579	1.730967	1.363973	-1.64927	-1.299597	5.5252	0.166149	-0.138708	5.1929	-4.94781	-3.948338
9.85	-0.0019	0.0296	11.0495	0.0220	0.0717	0.000011	0.0051	-0.96453	2.168058	1.708393	-1.382953	-1.089743	6.9204	0.228283	-0.01954	6.5042	-4.148858	-3.310777
9.86	-0.0015	0.0281	10.4667	0.0238	0.0683	0.000014	0.0047	-0.764792	1.973796	1.555317	-1.449532	-1.142206	6.3003	0.22538	-0.055984	5.9214	-4.348596	-3.470167
9.87	-0.0019	0.0269	10.0296	0.0256	0.0646	0.000017	0.0042	-0.96453	1.828099	1.440511	-1.382953	-1.089743	5.8353	0.224175	-0.056893	5.4843	-4.148858	-3.310777
9.88	-0.0015	0.0285	10.6124	0.0273	0.0607	0.000020	0.0037	-0.764792	2.022361	1.593586	-1.449532	-1.142206	6.4554	0.26409	-0.044468	6.0671	-4.348596	-3.470167
9.89	-0.0019	0.0253	9.4468	0.0288	0.0565	0.000024	0.0032	-0.96453	1.633836	1.287435	-1.382953	-1.089743	5.2152	0.225514	-0.069379	4.9015	-4.148858	-3.310777
9.9	0.0021	0.0285	10.6124	0.0303	0.0521	0.000028	0.0027	1.032849	2.022361	1.593586	-2.048746	-1.614377	6.4554	0.29309	-0.131867	6.0671	-6.146237	-4.90468
9.91	-0.0011	0.0261	9.7382	0.0316	0.0475	0.000032	0.0023	-0.565055	1.730967	1.363973	-1.516111	-1.19467	5.5252	0.261809	-0.069049	5.1929	-4.548334	-3.629557
9.92	-0.0007	0.0242	9.0098	0.0328	0.0427	0.000035	0.0018	-0.365317	1.488139	1.172628	-1.582691	-1.247133	4.7501	0.233606	-0.089157	4.4644	-4.748072	-3.788948
9.93	0.0005	0.0249	9.3012	0.0339	0.0378	0.000039	0.0014	0.233897	1.58527	1.249166	-1.782428	-1.404523	5.0602	0.256953	-0.094863	4.7558	-5.347285	-4.267119
9.94	-0.0007	0.0281	10.4667	0.0348	0.0326	0.000042	0.0011	-0.365317	1.973796	1.555317	-1.582691	-1.247133	6.3003	0.328749	-0.039786	5.9214	-4.748072	-3.788948
9.95	0.0001	0.0253	9.4468	0.0356	0.0274	0.000045	0.0008	0.034159	1.633836	1.287435	-1.715849	-1.35206	5.2152	0.278355	-0.060997	4.9015	-5.147548	-4.107728

90 draj H2

Model : POTONGAN KAKI JAKET
Posisi : 90 DRAJAT
H : 2 Cm

Perioda : 1 detik
waktu : 10 detik

t	SG trans	SG longitu	F long	u	u dot	u^3	u dot^2	F trans	Fbrce long	Fbrce long	Fbrce tran	Fbrce tran	Frata	F rata *u	Frata*udot	Flong -	Ftans -	Frata
det	Eta 1	Eta 2	N	m/det	m/det^2			N	horisontal	miring	horisontal	miring	longitu	N	N	2F long sil	2F tran sil	trans
0.01	-0.000333	0.030406	11.3409	0.0655	-0.0835	0.000281	0.0070	-0.165579	2.26519	1.784931	-1.64927	-1.299597	7.2305	0.710229	0.074913	6.7956	-4.94781	-2.632225
0.02	-0.000333	0.027281	10.1753	0.0651	-0.1666	0.000276	0.0277	-0.165579	1.876664	1.478779	-1.64927	-1.299597	5.9903	0.584925	0.265245	5.6300	-4.94781	-2.632225
0.03	0.0009	0.0308	11.4866	0.0645	-0.2490	0.000268	0.0620	0.433635	2.313756	1.8232	-1.849008	-1.456987	7.3855	0.714016	0.35116	6.9413	-5.547023	-2.951006
0.04	-0.0011	0.0296	11.0495	0.0636	-0.3305	0.000257	0.1092	-0.565055	2.168058	1.708393	-1.516111	-1.19467	6.9204	0.65972	0.22207	6.5042	-4.548334	-2.419705
0.05	0.0009	0.0257	9.5925	0.0624	-0.4107	0.000243	0.1687	0.433635	1.682401	1.325704	-1.849008	-1.456987	5.3702	0.502676	1.042725	5.0472	-5.547023	-2.951006
0.06	0.0001	0.0288	10.7581	0.0610	-0.4893	0.000227	0.2394	0.034159	2.070927	1.631855	-1.715849	-1.35206	6.6104	0.604916	0.706856	6.2128	-5.147548	-2.738486
0.07	0.0005	0.0285	10.6124	0.0594	-0.5659	0.000209	0.3202	0.233897	2.022361	1.593586	-1.782428	-1.404523	6.4554	0.574879	0.979727	6.0671	-5.347285	-2.844746
0.08	0.0009	0.0277	10.3210	0.0575	-0.6403	0.000190	0.4099	0.433635	1.92523	1.517049	-1.849008	-1.456987	6.1453	0.530018	1.347607	5.7757	-5.547023	-2.951006
0.09	-0.0007	0.0285	10.6124	0.0554	-0.7121	0.000170	0.5071	-0.365317	2.022361	1.593586	-1.582691	-1.247133	6.4554	0.536441	0.806226	6.0671	-4.748072	-2.525965
0.1	0.0021	0.0261	9.7382	0.0531	-0.7812	0.000150	0.6103	1.032849	1.730967	1.363973	-2.048746	-1.614377	5.5252	0.439945	2.383646	5.1929	-6.146237	-3.269787
0.11	-0.0015	0.0253	9.4468	0.0506	-0.8472	0.000129	0.7177	-0.764792	1.633836	1.287435	-1.449532	-1.142206	5.2152	0.395494	1.209177	4.9015	-4.348596	-2.313445
0.12	0.0005	0.0261	9.7382	0.0478	-0.9098	0.000109	0.8277	0.233897	1.730967	1.363973	-1.782428	-1.404523	5.5252	0.396414	2.049165	5.1929	-5.347285	-2.844746
0.13	-0.0015	0.0288	10.7581	0.0449	-0.9688	0.000091	0.9386	-0.764792	2.070927	1.631855	-1.449532	-1.142206	6.6104	0.445369	0.625683	6.2128	-4.348596	-2.313445
0.14	-0.0007	0.0277	10.3210	0.0418	-1.0240	0.000073	1.0487	-0.365317	1.92523	1.517049	-1.582691	-1.247133	6.1453	0.385534	1.33719	5.7757	-4.748072	-2.525965
0.15	0.0017	0.0285	10.6124	0.0386	-1.0752	0.000057	1.1561	0.833111	2.022361	1.593586	-1.982166	-1.561913	6.4554	0.373447	2.50585	6.0671	-5.946499	-3.163526
0.16	0.0013	0.0257	9.5925	0.0352	-1.1221	0.000043	1.2592	0.633373	1.682401	1.325704	-1.915587	-1.50945	6.7128	0.283208	3.073175	5.0472	-5.746761	-3.057266
0.17	-0.0003	0.0253	9.4468	0.0316	-1.1646	0.000032	1.3564	-0.165579	1.633836	1.287435	-1.64927	-1.299597	6.5190	0.247278	2.360205	4.9015	-4.94781	-2.632225
0.18	-0.0007	0.0292	10.9038	0.0279	-1.2026	0.000022	1.4461	-0.365317	2.119493	1.670124	-1.582691	-1.247133	8.4567	0.28351	1.152592	6.3585	-4.748072	-2.525965
0.19	0.0009	0.0269	10.0296	0.0242	-1.2357	0.000014	1.5270	0.433635	1.828099	1.440511	-1.849008	-1.456987	7.2941	0.21142	2.815463	5.4843	-5.547023	-2.951006
0.2	-0.0023	0.0273	10.1753	0.0203	-1.2640	0.000008	1.5977	-1.164268	1.876664	1.478779	-1.316373	-1.03728	7.4879	0.182188	0.750403	5.6300	-3.94912	-2.100924
0.21	-0.0031	0.0288	10.7581	0.0163	-1.2873	0.000004	1.6571	-1.563744	2.070927	1.631855	-1.183215	-0.932353	8.2630	0.161799	-0.197133	6.2128	-3.549644	-1.888404
0.22	0.0001	0.0304	11.3409	0.0123	-1.3055	0.000002	1.7043	0.034159	2.26519	1.784931	-1.715849	-1.35206	9.0381	0.133347	1.432692	6.7956	-5.147548	-2.738486
0.23	-0.0003	0.0234	8.7184	0.0082	-1.3186	0.000001	1.7386	-0.165579	1.391007	1.09609	-1.64927	-1.299597	5.5501	0.054771	3.244601	4.1730	-4.94781	-2.632225
0.24	0.0005	0.0285	10.6124	0.0041	-1.3264	0.000000	1.7594	0.233897	2.022361	1.593586	-1.782428	-1.404523	8.0692	0.039894	2.29648	6.0671	-5.347285	-2.844746
0.25	0.0001	0.0277	10.3210	0.0000	-1.3290	0.000000	1.7664	0.034159	1.92523	1.517049	-1.715849	-1.35206	7.6816	-2.32E-16	2.266374	5.7757	-5.147548	-2.738486
0.26	-0.0003	0.0281	10.4667	-0.0041	-1.3264	0.000000	1.7594	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.038936	1.881786	5.9214	-4.94781	-2.632225
0.27	0.0005	0.0288	10.7581	0.0082	-1.3186	0.000001	1.7386	0.233897	2.070927	1.631855	-1.782428	-1.404523	8.2630	0.081542	2.168379	6.2128	-5.347285	-2.844746

90 draj H2

0.46	-0.0019	0.0265	9.8839	-0.0636	-0.3305	-0.000257	0.1092	-0.96453	1.779533	1.402242	-1.382953	-1.089743	7.1003	-0.541495	0.31964	5.3386	-4.148858	-2.207184
0.47	0.0001	0.0245	9.1555	-0.0645	-0.2490	-0.000268	0.0620	0.034159	1.536705	1.210897	-1.715849	-1.35206	6.1314	-0.474221	0.597677	4.6101	-5.147548	-2.738486
0.48	-0.0007	0.0277	10.3210	-0.0651	-0.1666	-0.000276	0.0277	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	-0.600062	0.21751	5.7757	-4.748072	-2.525965
0.49	0.0009	0.0281	10.4667	-0.0655	-0.0835	-0.000281	0.0070	0.433635	1.973796	1.555317	-1.849008	-1.456987	7.8754	-0.618865	0.168397	5.9214	-5.547023	-2.951006
0.5	-0.0003	0.0281	10.4667	-0.0656	0.0000	-0.000282	0.0000	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.620089	-2.28E-15	5.9214	-4.94781	-2.632225
0.51	0.0001	0.0277	10.3210	-0.0655	0.0835	-0.000281	0.0070	0.034159	1.92523	1.517049	-1.715849	-1.35206	7.6816	-0.603638	-0.142307	5.7757	-5.147548	-2.738486
0.52	-0.0011	0.0281	10.4667	-0.0651	0.1666	-0.000276	0.0277	-0.565055	1.973796	1.555317	-1.516111	-1.19467	7.8754	-0.615199	-0.169775	5.9214	-4.548334	-2.419705
0.53	-0.0015	0.0277	10.3210	-0.0645	0.2490	-0.000268	0.0620	-0.764792	1.92523	1.517049	-1.449532	-1.142206	7.6816	-0.594118	-0.225707	5.7757	-4.348596	-2.313445
0.54	-0.0011	0.0300	11.1952	-0.0636	0.3305	-0.000257	0.1092	-0.565055	2.216624	1.746662	-1.516111	-1.19467	8.8443	-0.674498	-0.19337	6.6499	-4.548334	-2.419705
0.55	-0.0003	0.0253	9.4468	-0.0624	0.4107	-0.000243	0.1687	-0.165579	1.633836	1.287435	-1.64927	-1.299597	6.5190	-0.488165	-0.832292	4.9015	-4.94781	-2.632225
0.56	-0.0011	0.0304	11.3409	-0.0610	0.4893	-0.000227	0.2394	-0.565055	2.26519	1.784931	-1.516111	-1.19467	9.0381	-0.66166	-0.243752	6.7956	-4.548334	-2.419705
0.57	0.0009	0.0226	8.4270	-0.0594	0.5659	-0.000209	0.3202	0.433635	1.293876	1.019552	-1.849008	-1.456987	5.1625	-0.367799	-1.829822	3.8816	-5.547023	-2.951006
0.58	-0.0003	0.0292	10.9038	-0.0575	0.6403	-0.000190	0.4099	-0.165579	2.119493	1.670124	-1.64927	-1.299597	8.4567	-0.583499	-0.741557	6.3585	-4.94781	-2.632225
0.59	0.0001	0.0292	10.9038	-0.0554	0.7121	-0.000170	0.5071	0.034159	2.119493	1.670124	-1.715849	-1.35206	8.4567	-0.562205	-0.967031	6.3585	-5.147548	-2.738486
0.6	-0.0007	0.0312	11.6323	-0.0531	0.7812	-0.000150	0.6103	-0.365317	2.362321	1.861469	-1.582691	-1.247133	9.4256	-0.600411	-0.409564	7.0870	-4.748072	-2.525965
0.61	0.0005	0.0269	10.0296	-0.0506	0.8472	-0.000129	0.7177	0.233897	1.828099	1.440511	-1.782428	-1.404523	7.2941	-0.442519	-1.760978	5.4843	-5.347285	-2.844746
0.62	-0.0007	0.0300	11.1952	-0.0478	0.9098	-0.000109	0.8277	-0.365317	2.216624	1.746662	-1.582691	-1.247133	8.8443	-0.507636	-0.713991	6.6499	-4.748072	-2.525965
0.63	-0.0031	0.0249	9.3012	-0.0449	0.9688	-0.000091	0.9386	-1.563744	1.58527	1.249166	-1.183215	-0.932353	6.3252	-0.340925	-0.692915	4.7558	-3.549644	-1.888404
0.64	-0.0011	0.0226	8.4270	-0.0418	1.0240	-0.000073	1.0487	-0.565055	1.293876	1.019552	-1.516111	-1.19467	5.1625	-0.259103	-2.288642	3.8816	-4.548334	-2.419705
0.65	-0.0011	0.0257	9.5925	-0.0386	1.0752	-0.000057	1.1561	-0.565055	1.682401	1.325704	-1.516111	-1.19467	6.7128	-0.310671	-1.65608	5.0472	-4.548334	-2.419705
0.66	-0.0015	0.0265	9.8839	-0.0352	1.1221	-0.000043	1.2592	-0.764792	1.779533	1.402242	-1.449532	-1.142206	7.1003	-0.299559	-1.309345	5.3386	-4.348596	-2.313445
0.67	0.0001	0.0292	10.9038	-0.0316	1.1646	-0.000032	1.3564	0.034159	2.119493	1.670124	-1.715849	-1.35206	8.4567	-0.320781	-1.581511	6.3585	-5.147548	-2.738486
0.68	-0.0015	0.0249	9.3012	-0.0279	1.2026	-0.000022	1.4461	-0.764792	1.58527	1.249166	-1.449532	-1.142206	6.3252	-0.212051	-1.820857	4.7558	-4.348596	-2.313445
0.69	0.0001	0.0222	8.2813	-0.0242	1.2357	-0.000014	1.5270	0.034159	1.24531	0.981283	-1.715849	-1.35206	4.9688	-0.14402	-3.609457	3.7359	-5.147548	-2.738486
0.7	0.0005	0.0249	9.3012	-0.0203	1.2640	-0.000008	1.5977	0.233897	1.58527	1.249166	-1.782428	-1.404523	6.3252	-0.1539	-3.176226	4.7558	-5.347285	-2.844746
0.71	-0.0003	0.0261	9.7382	-0.0163	1.2873	-0.000004	1.6571	-0.165579	1.730967	1.363973	-1.64927	-1.299597	6.9065	-0.135238	-2.385176	5.1929	-4.94781	-2.632225
0.72	0.0005	0.0300	11.1952	-0.0123	1.3055	-0.000002	1.7043	0.233897	2.216624	1.746662	-1.782428	-1.404523	8.8443	-0.130488	-1.806812	6.6499	-5.347285	-2.844746
0.73	-0.0003	0.0277	10.3210	-0.0082	1.3186	-0.000001	1.7386	-0.165579	1.92523	1.517049	-1.64927	-1.299597	7.6816	-0.075805	-1.985136	5.7757	-4.94781	-2.632225
0.74	-0.0007	0.0214	7.9899	-0.0041	1.3264	0.000000	1.7594	-0.365317	1.148179	0.904746	-1.582691	-1.247133	4.5812	-0.022649	-3.574895	3.4445	-4.748072	-2.525965
0.75	-0.0015	0.0281	10.4667	0.0000	1.3290	0.000000	1.7664	-0.764792	1.973796	1.555317	-1.449532	-1.142206	7.8754	1.54E-15	-1.089127	5.9214	-4.348596	-2.313445
0.76	-0.0007	0.0292	10.9038	0.0041	1.3264	0.000000	1.7594	-0.365317	2.119493	1.670124	-1.582691	-1.247133	8.4567	0.04181	-1.271313	6.3585	-4.748072	-2.525965
0.77	0.0001	0.0261	9.7382	0.0082	1.3186	0.000001	1.7386	0.034159	1.730967	1.363973	-1.715849	-1.35206	6.9065	0.068156	-2.70649	5.1929	-5.147548	-2.738486
0.78	0.0021	0.0277	10.3210	0.0123	1.3055	0.000002	1.7043	1.032849	1.92523	1.517049	-2.048746	-1.614377	7.6816	0.113334	-3.53002	5.7757	-6.146237	-3.269787

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0.97	-0.0007	0.0257	9.5925	0.0645	0.2490	0.000268	0.0620	-0.365317	1.682401	1.325704	-1.582691	-1.247133	6.7128	0.519182	-0.433317	5.0472	-4.748072	-2.525965
0.98	-0.0023	0.0277	10.3210	0.0651	0.1666	0.000276	0.0277	-1.164268	1.92523	1.517049	-1.316373	-1.03728	7.6816	0.600062	-0.084426	5.7757	-3.94912	-2.100924
0.99	0.0009	0.0269	10.0296	0.0655	0.0835	0.000281	0.0070	0.433635	1.828099	1.440511	-1.849008	-1.456987	7.2941	0.573183	-0.190136	5.4843	-5.547023	-2.951006
1	0.0009	0.0277	10.3210	0.0656	0.0000	0.000282	0.0000	0.433635	1.92523	1.517049	-1.849008	-1.456987	7.6816	0.604832	1.17E-14	5.7757	-5.547023	-2.951006
1.01	-0.0007	0.0300	11.1952	0.0655	-0.0835	0.000281	0.0070	-0.365317	2.216624	1.746662	-1.582691	-1.247133	8.8443	0.695002	0.065491	6.6499	-4.748072	-2.525965
1.02	0.0001	0.0269	10.0296	0.0651	-0.1666	0.000276	0.0277	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	0.569788	0.312981	5.4843	-5.147548	-2.738486
1.03	-0.0011	0.0261	9.7382	0.0645	-0.2490	0.000268	0.0620	-0.565055	1.730967	1.363973	-1.516111	-1.19467	6.9065	0.53417	0.36195	5.1929	-4.548334	-2.419705
1.04	-0.0011	0.0292	10.9038	0.0636	-0.3305	0.000257	0.1092	-0.565055	2.119493	1.670124	-1.516111	-1.19467	8.4567	0.644942	0.25077	6.3585	-4.548334	-2.419705
1.05	0.0017	0.0265	9.8839	0.0624	-0.4107	0.000243	0.1687	0.833111	1.779533	1.402242	-1.982166	-1.561913	7.1003	0.531697	1.135463	5.3386	-5.946499	-3.163526
1.06	-0.0011	0.0296	11.0495	0.0610	-0.4893	0.000227	0.2394	-0.565055	2.168058	1.708393	-1.516111	-1.19467	8.6505	0.633288	0.32872	6.5042	-4.548334	-2.419705
1.07	-0.0019	0.0265	9.8839	0.0594	-0.5659	0.000209	0.3202	-0.96453	1.779533	1.402242	-1.382953	-1.089743	7.1003	0.505852	0.547252	5.3386	-4.148858	-2.207184
1.08	-0.0007	0.0277	10.3210	0.0575	-0.6403	0.000190	0.4099	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	0.530018	0.836061	5.7757	-4.748072	-2.525965
1.09	-0.0011	0.0277	10.3210	0.0554	-0.7121	0.000170	0.5071	-0.565055	1.92523	1.517049	-1.516111	-1.19467	7.6816	0.510676	0.787662	5.7757	-4.548334	-2.419705
1.1	-0.0011	0.0273	10.1753	0.0531	-0.7812	0.000150	0.6103	-0.565055	1.876664	1.478779	-1.516111	-1.19467	7.4879	0.476975	0.931875	5.6300	-4.548334	-2.419705
1.11	0.0009	0.0281	10.4667	0.0506	-0.8472	0.000129	0.7177	0.433635	1.973796	1.555317	-1.849008	-1.456987	7.8754	0.477787	1.709499	5.9214	-5.547023	-2.951006
1.12	0.0005	0.0281	10.4667	0.0478	-0.9098	0.000109	0.8277	0.233897	1.973796	1.555317	-1.782428	-1.404523	7.8754	0.452025	1.654158	5.9214	-5.347285	-2.844746
1.13	0.0017	0.0316	11.7780	0.0449	-0.9688	0.000091	0.9386	0.833111	2.410887	1.899738	-1.982166	-1.561913	9.6194	0.51848	1.584884	7.2327	-5.946499	-3.163526
1.14	-0.0007	0.0265	9.8839	0.0418	-1.0240	0.000073	1.0487	-0.365317	1.779533	1.402242	-1.582691	-1.247133	7.1003	0.356358	1.603957	5.3386	-4.748072	-2.525965
1.15	-0.0011	0.0296	11.0495	0.0386	-1.0752	0.000057	1.1561	-0.565055	2.168058	1.708393	-1.516111	-1.19467	8.6505	0.400352	0.722419	6.5042	-4.548334	-2.419705
1.16	0.0001	0.0253	9.4468	0.0352	-1.1221	0.000043	1.2592	0.034159	1.633836	1.287435	-1.715849	-1.35206	6.5190	0.275033	2.49821	4.9015	-5.147548	-2.738486
1.17	-0.0003	0.0269	10.0296	0.0316	-1.1646	0.000032	1.3564	-0.165579	1.828099	1.440511	-1.64927	-1.299597	7.2941	0.276679	1.955678	5.4843	-4.94781	-2.632225
1.18	0.0001	0.0292	10.9038	0.0279	-1.2026	0.000022	1.4461	0.034159	2.119493	1.670124	-1.715849	-1.35206	8.4567	0.28351	1.632983	6.3585	-5.147548	-2.738486
1.19	0.0013	0.0261	9.7382	0.0242	-1.2357	0.000014	1.5270	0.633373	1.730967	1.363973	-1.915587	-1.50945	6.9065	0.200187	3.276887	5.1929	-5.746761	-3.057266
1.2	-0.0015	0.0285	10.6124	0.0203	-1.2640	0.000008	1.5977	-0.764792	2.022361	1.593586	-1.449532	-1.142206	8.0692	0.196333	0.926063	6.0671	-4.348596	-2.313445
1.21	0.0017	0.0285	10.6124	0.0163	-1.2873	0.000004	1.6571	0.833111	2.022361	1.593586	-1.982166	-1.561913	8.0692	0.158004	3.00009	6.0671	-5.946499	-3.163526
1.22	0.0001	0.0253	9.4468	0.0123	-1.3055	0.000002	1.7043	0.034159	1.633836	1.287435	-1.715849	-1.35206	6.5190	0.09618	2.906406	4.9015	-5.147548	-2.738486
1.23	-0.0019	0.0308	11.4866	0.0082	-1.3186	0.000001	1.7386	-0.96453	2.313756	1.8232	-1.382953	-1.089743	9.2319	0.091104	0.015694	6.9413	-4.148858	-2.207184
1.24	-0.0019	0.0273	10.1753	0.0041	-1.3264	0.000000	1.7594	-0.96453	1.876664	1.478779	-1.382953	-1.089743	7.4879	0.03702	1.0524	5.6300	-4.148858	-2.207184
1.25	0.0001	0.0273	10.1753	0.0000	-1.3290	0.000000	1.7664	0.034159	1.876664	1.478779	-1.715849	-1.35206	7.4879	-2.96E-15	2.381781	5.6300	-5.147548	-2.738486
1.26	-0.0007	0.0277	10.3210	-0.0041	-1.3264	0.000000	1.7594	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	-0.037978	1.732029	5.7757	-4.748072	-2.525965
1.27	-0.0007	0.0265	9.8839	-0.0082	-1.3186	-0.000001	1.7386	-0.365317	1.779533	1.402242	-1.582691	-1.247133	7.1003	-0.070069	2.065259	5.3386	-4.748072	-2.525965
1.28	-0.0007	0.0269	10.0296	-0.0123	-1.3055	-0.000002	1.7043	-0.365317	1.828099	1.440511	-1.582691	-1.247133	7.2941	-0.107616	1.931439	5.4843	-4.748072	-2.525965

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8	-0.0003	0.0281	10.4667	-0.0651	-0.1666	-0.000276	0.0277	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.615199	0.236317	5.9214	-4.94781	-2.632225
9	0.0005	0.0245	9.1555	-0.0655	-0.0835	-0.000281	0.0070	0.233897	1.536705	1.210897	-1.782428	-1.404523	6.1314	-0.481819	0.216947	4.6101	-5.347285	-2.844746
5	-0.0007	0.0265	9.8839	-0.0656	0.0000	-0.000282	0.0000	-0.365317	1.779533	1.402242	-1.582691	-1.247133	7.1003	-0.559059	-1.4E-14	5.3386	-4.748072	-2.525965
51	-0.0043	0.0269	10.0296	-0.0655	0.0835	-0.000281	0.0070	-2.162958	1.828099	1.440511	-0.983477	-0.774963	7.2941	-0.573183	0.026552	5.4843	-2.95043	-1.569623
52	0.0009	0.0265	9.8839	-0.0651	0.1666	-0.000276	0.0277	0.433635	1.779533	1.402242	-1.849008	-1.456987	7.1003	-0.554651	-0.393987	5.3386	-5.547023	-2.951006
53	0.0001	0.0261	9.7382	-0.0645	0.2490	-0.000268	0.0620	0.034159	1.730967	1.363973	-1.715849	-1.35206	6.9065	-0.53417	-0.511176	5.1929	-5.147548	-2.738486
54	0.0017	0.0273	10.1753	-0.0636	0.3305	-0.000257	0.1092	0.833111	1.876664	1.478779	-1.982166	-1.561913	7.4879	-0.571052	-0.856394	5.6300	-5.946499	-3.163526
55	0.0021	0.0253	9.4468	-0.0624	0.4107	-0.000243	0.1687	1.032849	1.633836	1.287435	-2.048746	-1.614377	6.5190	-0.488165	-1.324482	4.9015	-6.146237	-3.269787
56	0.0013	0.0230	8.5727	-0.0610	0.4893	-0.000227	0.2394	0.633373	1.342442	1.057821	-1.915587	-1.50945	5.3563	-0.392126	-1.637284	4.0273	-5.746761	-3.057266
57	0.0005	0.0242	9.0098	-0.0594	0.5659	-0.000209	0.3202	0.233897	1.488139	1.172628	-1.782428	-1.404523	5.9377	-0.42302	-1.520243	4.4644	-5.347285	-2.844746
58	-0.0003	0.0285	10.6124	-0.0575	0.6403	-0.000190	0.4099	-0.165579	2.022361	1.593586	-1.64927	-1.299597	8.0692	-0.556758	-0.852752	6.0671	-4.94781	-2.632225
59	0.0005	0.0249	9.3012	-0.0554	0.7121	-0.000170	0.5071	0.233897	1.58527	1.249166	-1.782428	-1.404523	6.3252	-0.4205	-1.789491	4.7558	-5.347285	-2.844746
6	-0.0007	0.0281	10.4667	-0.0531	0.7812	-0.000150	0.6103	-0.365317	1.973796	1.555317	-1.582691	-1.247133	7.8754	-0.501663	-0.95224	5.9214	-4.748072	-2.525965
61	0.0005	0.0261	9.7382	-0.0506	0.8472	-0.000129	0.7177	0.233897	1.730967	1.363973	-1.782428	-1.404523	6.9065	-0.419007	-1.908104	5.1929	-5.347285	-2.844746
62	-0.0003	0.0281	10.4667	-0.0478	0.9098	-0.000109	0.8277	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.452025	-1.290718	5.9214	-4.94781	-2.632225
63	-0.0003	0.0285	10.6124	-0.0449	0.9688	-0.000091	0.9386	-0.165579	2.022361	1.593586	-1.64927	-1.299597	8.0692	-0.434925	-1.290347	6.0671	-4.94781	-2.632225
64	0.0001	0.0285	10.6124	-0.0418	1.0240	-0.000073	1.0487	0.034159	2.022361	1.593586	-1.715849	-1.35206	8.0692	-0.404985	-1.568426	6.0671	-5.147548	-2.738486
65	-0.0011	0.0277	10.3210	-0.0386	1.0752	-0.000057	1.1561	-0.565055	1.92523	1.517049	-1.516111	-1.19467	7.6816	-0.355511	-1.18925	5.7757	-4.548334	-2.419705
66	0.0005	0.0288	10.7581	-0.0352	1.1221	-0.000043	1.2592	0.233897	2.070927	1.631855	-1.782428	-1.404523	8.2630	-0.348611	-1.845375	6.2128	-5.347285	-2.844746
67	-0.0015	0.0285	10.6124	-0.0316	1.1646	-0.000032	1.3564	-0.764792	2.022361	1.593586	-1.449532	-1.142206	8.0692	-0.30608	-0.853277	6.0671	-4.348596	-2.313445
68	-0.0015	0.0265	9.8839	-0.0279	1.2026	-0.000022	1.4461	-0.764792	1.779533	1.402242	-1.449532	-1.142206	7.1003	-0.238036	-1.403164	5.3386	-4.348596	-2.313445
69	-0.0003	0.0300	11.1952	-0.0242	1.2357	-0.000014	1.5270	-0.165579	2.216624	1.746662	-1.64927	-1.299597	8.8443	-0.256353	-1.216587	6.6499	-4.94781	-2.632225
.7	0.0009	0.0292	10.9038	-0.0203	1.2640	-0.000008	1.5977	0.433635	2.119493	1.670124	-1.849008	-1.456987	8.4567	-0.205762	-2.221351	6.3585	-5.547023	-2.951006
71	-0.0003	0.0257	9.5925	-0.0163	1.2873	-0.000004	1.6571	-0.165579	1.682401	1.325704	-1.64927	-1.299597	6.7128	-0.131444	-2.496957	5.0472	-4.94781	-2.632225
72	-0.0003	0.0269	10.0296	-0.0123	1.3055	-0.000002	1.7043	-0.165579	1.828099	1.440511	-1.64927	-1.299597	7.2941	-0.107616	-2.192197	5.4843	-4.94781	-2.632225
73	-0.0015	0.0281	10.4667	-0.0082	1.3186	-0.000001	1.7386	-0.764792	1.973796	1.555317	-1.449532	-1.142206	7.8754	-0.077718	-1.080539	5.9214	-4.348596	-2.313445
74	-0.0011	0.0288	10.7581	-0.0041	1.3264	0.000000	1.7594	-0.565055	2.070927	1.631855	-1.516111	-1.19467	8.2630	-0.040852	-1.121556	6.2128	-4.548334	-2.419705
75	-0.0003	0.0245	9.1555	0.0000	1.3290	0.000000	1.7664	-0.165579	1.536705	1.210897	-1.64927	-1.299597	6.1314	4.08E-15	-2.924168	4.6101	-4.94781	-2.632225
76	0.0005	0.0281	10.4667	0.0041	1.3264	0.000000	1.7594	0.233897	1.973796	1.555317	-1.782428	-1.404523	7.8754	0.038936	-2.411659	5.9214	-5.347285	-2.844746
77	-0.0003	0.0308	11.4866	0.0082	1.3186	0.000001	1.7386	-0.165579	2.313756	1.8232	-1.64927	-1.299597	9.2319	0.091104	-1.069161	6.9413	-4.94781	-2.632225
78	-0.0007	0.0226	8.4270	0.0123	1.3055	0.000002	1.7043	-0.365317	1.293876	1.019552	-1.582691	-1.247133	5.1625	0.076168	-3.178429	3.8816	-4.748072	-2.525965
79	-0.0003	0.0269	10.0296	0.0163	1.2873	0.000004	1.6571	-0.165579	1.828099	1.440511	-1.64927	-1.299597	7.2941	0.142827	-2.161614	5.4843	-4.94781	-2.632225
.8	-0.0003	0.0308	11.4866	0.0203	1.2640	0.000008	1.5977	-0.165579	2.313756	1.8232	-1.64927	-1.299597	9.2319	0.224622	-1.024915	6.9413	-4.94781	-2.632225
81	0.0005	0.0242	9.0098	0.0242	1.2357	0.000014	1.5270	0.233897	1.488139	1.172628	-1.782428	-1.404523	5.9377	0.172104	-3.319763	4.4644	-5.347285	-2.844746

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.99	-0.0007	0.0249	9.3012	0.0655	0.0835	0.000281	0.0070	-0.365317	1.58527	1.249166	-1.582691	-1.247133	6.3252	0.497047	-0.159695	4.7558	-4.748072	-2.525965
2	-0.0011	0.0249	9.3012	0.0656	0.0000	0.000282	0.0000	-0.565055	1.58527	1.249166	-1.516111	-1.19467	6.3252	0.49803	1.91E-14	4.7558	-4.548334	-2.419705
.01	0.0001	0.0265	9.8839	0.0655	-0.0835	0.000281	0.0070	0.034159	1.779533	1.402242	-1.715849	-1.35206	7.1003	0.557956	0.164046	5.3386	-5.147548	-2.738486
.02	0.0017	0.0273	10.1753	0.0651	-0.1666	0.000276	0.0277	0.833111	1.876664	1.478779	-1.982166	-1.561913	7.4879	0.584925	0.4316	5.6300	-5.946499	-3.163526
.03	-0.0007	0.0277	10.3210	0.0645	-0.2490	0.000268	0.0620	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	0.594118	0.325192	5.7757	-4.748072	-2.525965
.04	0.0009	0.0269	10.0296	0.0636	-0.3305	0.000257	0.1092	0.433635	1.828099	1.440511	-1.849008	-1.456987	7.2941	0.556273	0.75306	5.4843	-5.547023	-2.951006
.05	0.0021	0.0288	10.7581	0.0624	-0.4107	0.000243	0.1687	1.032849	2.070927	1.631855	-2.048746	-1.614377	8.2630	0.618761	1.003518	6.2128	-6.146237	-3.269787
.06	-0.0007	0.0296	11.0495	0.0610	-0.4893	0.000227	0.2394	-0.365317	2.168058	1.708393	-1.582691	-1.247133	8.6505	0.633288	0.426443	6.5042	-4.748072	-2.525965
.07	0.0009	0.0281	10.4667	0.0594	-0.5659	0.000209	0.3202	0.433635	1.973796	1.555317	-1.849008	-1.456987	7.8754	0.561073	1.141892	5.9214	-5.547023	-2.951006
.08	-0.0003	0.0245	9.1555	0.0575	-0.6403	0.000190	0.4099	-0.165579	1.536705	1.210897	-1.64927	-1.299597	6.1314	0.423056	1.408729	4.6101	-4.94781	-2.632225
.09	-0.0007	0.0277	10.3210	0.0554	-0.7121	0.000170	0.5071	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	0.510676	0.929902	5.7757	-4.748072	-2.525965
2.1	0.0013	0.0288	10.7581	0.0531	-0.7812	0.000150	0.6103	0.633373	2.070927	1.631855	-1.915587	-1.50945	8.2630	0.52635	1.596738	6.2128	-5.746761	-3.057266
.11	0.0005	0.0253	9.4468	0.0506	-0.8472	0.000129	0.7177	0.233897	1.633836	1.287435	-1.782428	-1.404523	6.5190	0.395494	2.05523	4.9015	-5.347285	-2.844746
.12	0.0005	0.0273	10.1753	0.0478	-0.9098	0.000109	0.8277	0.233897	1.876664	1.478779	-1.782428	-1.404523	7.4879	0.429781	1.812161	5.6300	-5.347285	-2.844746
.13	-0.0007	0.0257	9.5925	0.0449	-0.9688	0.000091	0.9386	-0.365317	1.682401	1.325704	-1.582691	-1.247133	6.7128	0.361814	1.685731	5.0472	-4.748072	-2.525965
.14	-0.0003	0.0249	9.3012	0.0418	-1.0240	0.000073	1.0487	-0.165579	1.58527	1.249166	-1.64927	-1.299597	6.3252	0.317456	2.164188	4.7558	-4.94781	-2.632225
.15	0.0001	0.0269	10.0296	0.0386	-1.0752	0.000057	1.1561	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	0.337575	2.020267	5.4843	-5.147548	-2.738486
.16	-0.0003	0.0265	9.8839	0.0352	-1.1221	0.000043	1.2592	-0.165579	1.779533	1.402242	-1.64927	-1.299597	7.1003	0.299559	1.981751	5.3386	-4.94781	-2.632225
.17	-0.0007	0.0304	11.3409	0.0316	-1.1646	0.000032	1.3564	-0.365317	2.26519	1.784931	-1.582691	-1.247133	9.0381	0.342832	0.812867	6.7956	-4.748072	-2.525965
.18	-0.0003	0.0296	11.0495	0.0279	-1.2026	0.000022	1.4461	-0.165579	2.168058	1.708393	-1.64927	-1.299597	8.6505	0.290006	1.288365	6.5042	-4.94781	-2.632225
.19	-0.0011	0.0273	10.1753	0.0242	-1.2357	0.000014	1.5270	-0.565055	1.876664	1.478779	-1.516111	-1.19467	7.4879	0.217037	1.474068	5.6300	-4.548334	-2.419705
2.2	0.0005	0.0265	9.8839	0.0203	-1.2640	0.000008	1.5977	0.233897	1.779533	1.402242	-1.782428	-1.404523	7.1003	0.172759	2.737192	5.3386	-5.347285	-2.844746
.21	0.0013	0.0277	10.3210	0.0163	-1.2873	0.000004	1.6571	0.633373	1.92523	1.517049	-1.915587	-1.50945	7.6816	0.150415	2.966532	5.7757	-5.746761	-3.057266
.22	-0.0011	0.0269	10.0296	0.0123	-1.3055	0.000002	1.7043	-0.565055	1.828099	1.440511	-1.516111	-1.19467	7.2941	0.107616	1.670681	5.4843	-4.548334	-2.419705
.23	0.0001	0.0253	9.4468	0.0082	-1.3186	0.000001	1.7386	0.034159	1.633836	1.287435	-1.715849	-1.35206	6.5190	0.064332	2.935484	4.9015	-5.147548	-2.738486
.24	-0.0011	0.0300	11.1952	0.0041	-1.3264	0.000000	1.7594	-0.565055	2.216624	1.746662	-1.516111	-1.19467	8.8443	0.043726	0.776018	6.6499	-4.548334	-2.419705
.25	-0.0003	0.0300	11.1952	0.0000	-1.3290	0.000000	1.7664	-0.165579	2.216624	1.746662	-1.64927	-1.299597	8.8443	1.77E-14	1.308473	6.6499	-4.94781	-2.632225
.26	-0.0019	0.0304	11.3409	-0.0041	-1.3264	0.000000	1.7594	-0.96453	2.26519	1.784931	-1.382953	-1.089743	9.0381	-0.044684	0.130967	6.7956	-4.148858	-2.207184
.27	-0.0019	0.0285	10.6124	-0.0082	-1.3186	-0.000001	1.7386	-0.96453	2.022361	1.593586	-1.382953	-1.089743	8.0692	-0.07963	0.702675	6.0671	-4.148858	-2.207184
.28	-0.0003	0.0304	11.3409	-0.0123	-1.3055	-0.000002	1.7043	-0.165579	2.26519	1.784931	-1.64927	-1.299597	9.0381	-0.133347	1.171934	6.7956	-4.94781	-2.632225
.29	-0.0003	0.0249	9.3012	-0.0163	-1.2873	-0.000004	1.6571	-0.165579	1.58527	1.249166	-1.64927	-1.299597	6.3252	-0.123855	2.720519	4.7558	-4.94781	-2.632225
2.3	0.0005	0.0285	10.6124	-0.0203	-1.2640	-0.000008	1.5977	0.233897	2.022361	1.593586	-1.782428	-1.404523	8.0692	-0.196333	2.1884	6.0671	-5.347285	-2.844746
.31	0.0005	0.0292	10.9038	-0.0242	-1.2357	-0.000014	1.5270	0.233897	2.119493	1.670124	-1.782428	-1.404523	8.4567	-0.24512	1.924829	6.3585	-5.347285	-2.844746
.32	-0.0011	0.0269	10.0296	-0.0279	-1.2026	-0.000022	1.4461	-0.565055	1.828099	1.440511	-1.516111	-1.19467	7.2941	-0.244532	1.538937	5.4843	-4.548334	-2.419705

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.6	0.0017	0.0269	10.0296	-0.0531	0.7812	-0.000150	0.6103	0.833111	1.828099	1.440511	-1.982166	-1.561913	7.2941	-0.464632	-2.091944	5.4843	-5.946499	-3.163526
.61	-0.0023	0.0292	10.9038	-0.0506	0.8472	-0.000129	0.7177	-1.164268	2.119493	1.670124	-1.316373	-1.03728	8.4567	-0.513055	-0.135125	6.3585	-3.94912	-2.100924
.62	0.0009	0.0273	10.1753	-0.0478	0.9098	-0.000109	0.8277	0.433635	1.876664	1.478779	-1.849008	-1.456987	7.4879	-0.429781	-1.993881	5.6300	-5.547023	-2.951006
.63	0.0005	0.0222	8.2813	-0.0449	0.9688	-0.000091	0.9386	0.233897	1.24531	0.981283	-1.782428	-1.404523	4.9688	-0.267814	-3.023419	3.7359	-5.347285	-2.844746
.64	-0.0015	0.0285	10.6124	-0.0418	1.0240	-0.000073	1.0487	-0.764792	2.022361	1.593586	-1.449532	-1.142206	8.0692	-0.404985	-0.750264	6.0671	-4.348596	-2.313445
.65	-0.0015	0.0288	10.7581	-0.0386	1.0752	-0.000057	1.1561	-0.764792	2.070927	1.631855	-1.449532	-1.142206	8.2630	-0.382415	-0.69439	6.2128	-4.348596	-2.313445
.66	-0.0007	0.0273	10.1753	-0.0352	1.1221	-0.000043	1.2592	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	-0.31591	-1.562733	5.6300	-4.748072	-2.525965
.67	0.0001	0.0285	10.6124	-0.0316	1.1646	-0.000032	1.3564	0.034159	2.022361	1.593586	-1.715849	-1.35206	8.0692	-0.30608	-1.783775	6.0671	-5.147548	-2.738486
.68	-0.0007	0.0281	10.4667	-0.0279	1.2026	-0.000022	1.4461	-0.365317	1.973796	1.555317	-1.582691	-1.247133	7.8754	-0.264021	-1.465862	5.9214	-4.748072	-2.525965
.69	-0.0015	0.0292	10.9038	-0.0242	1.2357	-0.000014	1.5270	-0.764792	2.119493	1.670124	-1.449532	-1.142206	8.4567	-0.24512	-0.690737	6.3585	-4.348596	-2.313445
.7	-0.0015	0.0288	10.7581	-0.0203	1.2640	-0.000008	1.5977	-0.764792	2.070927	1.631855	-1.449532	-1.142206	8.2630	-0.201048	-0.816304	6.2128	-4.348596	-2.313445
.71	0.0009	0.0296	11.0495	-0.0163	1.2873	-0.000004	1.6571	0.433635	2.168058	1.708393	-1.849008	-1.456987	8.6505	-0.169387	-2.150506	6.5042	-5.547023	-2.951006
.72	0.0005	0.0242	9.0098	-0.0123	1.3055	-0.000002	1.7043	0.233897	1.488139	1.172628	-1.782428	-1.404523	5.9377	-0.087604	-3.507252	4.4644	-5.347285	-2.844746
.73	0.0001	0.0285	10.6124	-0.0082	1.3186	-0.000001	1.7386	0.034159	2.022361	1.593586	-1.715849	-1.35206	8.0692	-0.07963	-2.019509	6.0671	-5.147548	-2.738486
.74	-0.0011	0.0285	10.6124	-0.0041	1.3264	0.000000	1.7594	-0.565055	2.022361	1.593586	-1.516111	-1.19467	8.0692	-0.039894	-1.236735	6.0671	-4.548334	-2.419705
.75	-0.0019	0.0300	11.1952	0.0000	1.3290	0.000000	1.7664	-0.96453	2.216624	1.746662	-1.382953	-1.089743	8.8443	-5.32E-13	-0.246633	6.6499	-4.148858	-2.207184
.76	0.0001	0.0273	10.1753	0.0041	1.3264	0.000000	1.7594	0.034159	1.876664	1.478779	-1.715849	-1.35206	7.4879	0.03702	-2.377081	5.6300	-5.147548	-2.738486
.77	0.0005	0.0285	10.6124	0.0082	1.3186	0.000001	1.7386	0.233897	2.022361	1.593586	-1.782428	-1.404523	8.0692	0.07963	-2.282876	6.0671	-5.347285	-2.844746
.78	-0.0023	0.0249	9.3012	0.0123	1.3055	0.000002	1.7043	-1.164268	1.58527	1.249166	-1.316373	-1.03728	6.3252	0.093321	-1.45522	4.7558	-3.94912	-2.100924
.79	0.0005	0.0300	11.1952	0.0163	1.2873	0.000004	1.6571	0.233897	2.216624	1.746662	-1.782428	-1.404523	8.8443	0.173182	-1.781605	6.6499	-5.347285	-2.844746
.8	0.0001	0.0261	9.7382	0.0203	1.2640	0.000008	1.5977	0.034159	1.730967	1.363973	-1.715849	-1.35206	6.9065	0.168044	-2.594483	5.1929	-5.147548	-2.738486
.81	-0.0015	0.0277	10.3210	0.0242	1.2357	0.000014	1.5270	-0.764792	1.92523	1.517049	-1.449532	-1.142206	7.6816	0.222653	-1.119947	5.7757	-4.348596	-2.313445
.82	0.0001	0.0288	10.7581	0.0279	1.2026	0.000022	1.4461	0.034159	2.070927	1.631855	-1.715849	-1.35206	8.2630	0.277014	-1.737407	6.2128	-5.147548	-2.738486
.83	-0.0007	0.0273	10.1753	0.0316	1.1646	0.000032	1.3564	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	0.284029	-1.621922	5.6300	-4.748072	-2.525965
.84	-0.0003	0.0269	10.0296	0.0352	1.1221	0.000043	1.2592	-0.165579	1.828099	1.440511	-1.64927	-1.299597	7.2941	0.307734	-1.88431	5.4843	-4.94781	-2.632225
.85	-0.0003	0.0261	9.7382	0.0386	1.0752	0.000057	1.1561	-0.165579	1.730967	1.363973	-1.64927	-1.299597	6.9065	0.319639	-1.992237	5.1929	-4.94781	-2.632225
.86	0.0005	0.0292	10.9038	0.0418	1.0240	0.000073	1.0487	0.233897	2.119493	1.670124	-1.782428	-1.404523	8.4567	0.424436	-1.595121	6.3585	-5.347285	-2.844746
.87	-0.0015	0.0285	10.6124	0.0449	0.9688	0.000091	0.9386	-0.764792	2.022361	1.593586	-1.449532	-1.142206	8.0692	0.434925	-0.709811	6.0671	-4.348596	-2.313445
.88	0.0005	0.0249	9.3012	0.0478	0.9098	0.000109	0.8277	0.233897	1.58527	1.249166	-1.782428	-1.404523	6.3252	0.363048	-2.286169	4.7558	-5.347285	-2.844746
.89	0.0009	0.0265	9.8839	0.0506	0.8472	0.000129	0.7177	0.433635	1.779533	1.402242	-1.849008	-1.456987	7.1003	0.430763	-2.003751	5.3386	-5.547023	-2.951006
.9	-0.0007	0.0273	10.1753	0.0531	0.7812	0.000150	0.6103	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	0.476975	-1.087909	5.6300	-4.748072	-2.525965
.91	-0.0007	0.0273	10.1753	0.0554	0.7121	0.000170	0.5071	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	0.497794	-0.991741	5.6300	-4.748072	-2.525965
.92	0.0001	0.0265	9.8839	0.0575	0.6403	0.000190	0.4099	0.034159	1.779533	1.402242	-1.715849	-1.35206	7.1003	0.489907	-1.258627	5.3386	-5.147548	-2.738486

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.11	-0.0027	0.0285	10.6124	0.0506	-0.8472	0.000129	0.7177	-1.364006	2.022361	1.593586	-1.249794	-0.984816	8.0692	0.489543	0.113041	6.0671	-3.749382	-1.994664
.12	-0.0019	0.0273	10.1753	0.0478	-0.9098	0.000109	0.8277	-0.96453	1.876664	1.478779	-1.382953	-1.089743	7.4879	0.429781	0.721842	5.6300	-4.148858	-2.207184
.13	-0.0007	0.0292	10.9038	0.0449	-0.9688	0.000091	0.9386	-0.365317	2.119493	1.670124	-1.582691	-1.247133	8.4567	0.455813	0.928579	6.3585	-4.748072	-2.525965
.14	0.0021	0.0285	10.6124	0.0418	-1.0240	0.000073	1.0487	1.032849	2.022361	1.593586	-2.048746	-1.614377	8.0692	0.404985	2.591129	6.0671	-6.146237	-3.269787
.15	-0.0019	0.0285	10.6124	0.0386	-1.0752	0.000057	1.1561	-0.96453	2.022361	1.593586	-1.382953	-1.089743	8.0692	0.373447	0.572994	6.0671	-4.148858	-2.207184
.16	0.0001	0.0300	11.1952	0.0352	-1.1221	0.000043	1.2592	0.034159	2.216624	1.746662	-1.715849	-1.35206	8.8443	0.373137	1.328916	6.6499	-5.147548	-2.738486
.17	0.0009	0.0261	9.7382	0.0316	-1.1646	0.000032	1.3564	0.433635	1.730967	1.363973	-1.849008	-1.456987	6.9065	0.261979	2.855814	5.1929	-5.547023	-2.951006
.18	-0.0007	0.0300	11.1952	0.0279	-1.2026	0.000022	1.4461	-0.365317	2.216624	1.746662	-1.582691	-1.247133	8.8443	0.296503	0.943746	6.6499	-4.748072	-2.525965
.19	0.0021	0.0300	11.1952	0.0242	-1.2357	0.000014	1.5270	1.032849	2.216624	1.746662	-2.048746	-1.614377	8.8443	0.256353	2.697498	6.6499	-6.146237	-3.269787
.2	-0.0019	0.0269	10.0296	0.0203	-1.2640	0.000008	1.5977	-0.96453	1.828099	1.440511	-1.382953	-1.089743	7.2941	0.177474	1.112629	5.4843	-4.148858	-2.207184
.21	0.0009	0.0300	11.1952	0.0163	-1.2873	0.000004	1.6571	0.433635	2.216624	1.746662	-1.849008	-1.456987	8.8443	0.173182	2.038725	6.6499	-5.547023	-2.951006
.22	0.0005	0.0257	9.5925	0.0123	-1.3055	0.000002	1.7043	0.233897	1.682401	1.325704	-1.782428	-1.404523	6.7128	0.099039	3.053802	5.0472	-5.347285	-2.844746
.23	-0.0003	0.0320	11.9237	0.0082	-1.3186	0.000001	1.7386	-0.165579	2.459452	1.938007	-1.64927	-1.299597	9.8132	0.09684	0.725671	7.3784	-4.94781	-2.632225
.24	-0.0007	0.0261	9.7382	0.0041	-1.3264	0.000000	1.7594	-0.365317	1.730967	1.363973	-1.582691	-1.247133	6.9065	0.034146	2.192745	5.1929	-4.748072	-2.525965
.25	-0.0011	0.0277	10.3210	0.0000	-1.3290	0.000000	1.7664	-0.565055	1.92523	1.517049	-1.516111	-1.19467	7.6816	4.99E-13	1.469993	5.7757	-4.548334	-2.419705
.26	-0.0003	0.0281	10.4667	-0.0041	-1.3264	0.000000	1.7594	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.038936	1.881786	5.9214	-4.94781	-2.632225
.27	0.0021	0.0277	10.3210	-0.0082	-1.3186	-0.000001	1.7386	1.032849	1.92523	1.517049	-2.048746	-1.614377	7.6816	-0.075805	3.565337	5.7757	-6.146237	-3.269787
.28	-0.0007	0.0281	10.4667	-0.0123	-1.3055	-0.000002	1.7043	-0.365317	1.973796	1.555317	-1.582691	-1.247133	7.8754	-0.116193	1.591351	5.9214	-4.748072	-2.525965
.29	0.0009	0.0285	10.6124	-0.0163	-1.2873	-0.000004	1.6571	0.433635	2.022361	1.593586	-1.849008	-1.456987	8.0692	-0.158004	2.48585	6.0671	-5.547023	-2.951006
.3	-0.0007	0.0269	10.0296	-0.0203	-1.2640	-0.000008	1.5977	-0.365317	1.828099	1.440511	-1.582691	-1.247133	7.2941	-0.177474	1.870031	5.4843	-4.748072	-2.525965
.31	-0.0023	0.0285	10.6124	-0.0242	-1.2357	-0.000014	1.5270	-1.164268	2.022361	1.593586	-1.316373	-1.03728	8.0692	-0.233887	0.411705	6.0671	-3.94912	-2.100924
.32	0.0029	0.0253	9.4468	-0.0279	-1.2026	-0.000022	1.4461	1.432325	1.633836	1.287435	-2.181904	-1.719304	6.5190	-0.218547	4.358584	4.9015	-6.545713	-3.482307
.33	-0.0003	0.0296	11.0495	-0.0316	-1.1646	-0.000032	1.3564	-0.165579	2.168058	1.708393	-1.64927	-1.299597	8.6505	-0.328131	1.247755	6.5042	-4.94781	-2.632225
.34	-0.0019	0.0253	9.4468	-0.0352	-1.1221	-0.000043	1.2592	-0.96453	1.633836	1.287435	-1.382953	-1.089743	6.5190	-0.275033	1.377533	4.9015	-4.148858	-2.207184
.35	-0.0003	0.0281	10.4667	-0.0386	-1.0752	-0.000057	1.1561	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	-0.364479	1.525407	5.9214	-4.94781	-2.632225
.36	-0.0023	0.0253	9.4468	-0.0418	-1.0240	-0.000073	1.0487	-1.164268	1.633836	1.287435	-1.316373	-1.03728	6.5190	-0.327181	1.052563	4.9015	-3.94912	-2.100924
.37	-0.0003	0.0249	9.3012	-0.0449	-0.9688	-0.000091	0.9386	-0.165579	1.58527	1.249166	-1.64927	-1.299597	6.3252	-0.340925	2.047499	4.7558	-4.94781	-2.632225
.38	0.0001	0.0285	10.6124	-0.0478	-0.9098	-0.000109	0.8277	0.034159	2.022361	1.593586	-1.715849	-1.35206	8.0692	-0.463148	1.393437	6.0671	-5.147548	-2.738486
.39	-0.0007	0.0230	8.5727	-0.0506	-0.8472	-0.000129	0.7177	-0.365317	1.342442	1.057821	-1.582691	-1.247133	5.3563	-0.324958	1.988977	4.0273	-4.748072	-2.525965
.4	-0.0023	0.0269	10.0296	-0.0531	-0.7812	-0.000150	0.6103	-1.164268	1.828099	1.440511	-1.316373	-1.03728	7.2941	-0.464632	0.531609	5.4843	-3.94912	-2.100924
.41	0.0017	0.0269	10.0296	-0.0554	-0.7121	-0.000170	0.5071	0.833111	1.828099	1.440511	-1.982166	-1.561913	7.2941	-0.484912	1.907022	5.4843	-5.946499	-3.163526
.42	-0.0019	0.0288	10.7581	-0.0575	-0.6403	-0.000190	0.4099	-0.96453	2.070927	1.631855	-1.382953	-1.089743	8.2630	-0.570128	0.285609	6.2128	-4.148858	-2.207184
.43	-0.0007	0.0292	10.9038	-0.0594	-0.5659	-0.000209	0.3202	-0.365317	2.119493	1.670124	-1.582691	-1.247133	8.4567	-0.602489	0.542369	6.3585	-4.748072	-2.525965
.44	-0.0007	0.0277	10.3210	-0.0610	-0.4893	-0.000227	0.2394	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	-0.562358	0.638863	5.7757	-4.748072	-2.525965

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.62	0.0005	0.0288	10.7581	-0.0478	0.9098	-0.000109	0.8277	0.233897	2.070927	1.631855	-1.782428	-1.404523	8.2630	-0.47427	-1.496155	6.2128	-5.347285	-2.844746
.63	0.0001	0.0288	10.7581	-0.0449	0.9688	-0.000091	0.9386	0.034159	2.070927	1.631855	-1.715849	-1.35206	8.2630	-0.445369	-1.399732	6.2128	-5.147548	-2.738486
.64	0.0001	0.0273	10.1753	-0.0418	1.0240	-0.000073	1.0487	0.034159	1.876664	1.478779	-1.715849	-1.35206	7.4879	-0.375809	-1.835194	5.6300	-5.147548	-2.738486
.65	-0.0015	0.0285	10.6124	-0.0386	1.0752	-0.000057	1.1561	-0.764792	2.022361	1.593586	-1.449532	-1.142206	8.0692	-0.373447	-0.787756	6.0671	-4.348596	-2.313445
.66	0.0005	0.0257	9.5925	-0.0352	1.1221	-0.000043	1.2592	0.233897	1.682401	1.325704	-1.782428	-1.404523	6.7128	-0.283208	-2.624904	5.0472	-5.347285	-2.844746
.67	-0.0007	0.0253	9.4468	-0.0316	1.1646	-0.000032	1.3564	-0.365317	1.633836	1.287435	-1.582691	-1.247133	6.5190	-0.247278	-2.12758	4.9015	-4.748072	-2.525965
.68	0.0001	0.0281	10.4667	-0.0279	1.2026	-0.000022	1.4461	0.034159	1.973796	1.555317	-1.715849	-1.35206	7.8754	-0.264021	-1.946253	5.9214	-5.147548	-2.738486
.69	-0.0003	0.0288	10.7581	-0.0242	1.2357	-0.000014	1.5270	-0.165579	2.070927	1.631855	-1.64927	-1.299597	8.2630	-0.239503	-1.538495	6.2128	-4.94781	-2.632225
3.7	-0.0003	0.0242	9.0098	-0.0203	1.2640	-0.000008	1.5977	-0.165579	1.488139	1.172628	-1.64927	-1.299597	5.9377	-0.14447	-2.890808	4.4644	-4.94781	-2.632225
.71	0.0009	0.0351	13.0893	-0.0163	1.2873	-0.000004	1.6571	0.433635	2.847978	2.244158	-1.849008	-1.456987	11.3634	-0.222508	-0.585571	8.5439	-5.547023	-2.951006
.72	0.0021	0.0257	9.5925	-0.0123	1.3055	-0.000002	1.7043	1.032849	1.682401	1.325704	-2.048746	-1.614377	6.7128	-0.099039	-4.096834	5.0472	-6.146237	-3.269787
.73	-0.0011	0.0292	10.9038	-0.0082	1.3186	-0.000001	1.7386	-0.565055	2.119493	1.670124	-1.516111	-1.19467	8.4567	-0.083455	-1.000415	6.3585	-4.548334	-2.419705
.74	0.0001	0.0253	9.4468	-0.0041	1.3264	0.000000	1.7594	0.034159	1.633836	1.287435	-1.715849	-1.35206	6.5190	-0.03223	-2.952976	4.9015	-5.147548	-2.738486
.75	-0.0003	0.0285	10.6124	0.0000	1.3290	0.000000	1.7664	-0.165579	2.022361	1.593586	-1.64927	-1.299597	8.0692	-5.67E-13	-1.7701	6.0671	-4.94781	-2.632225
.76	0.0001	0.0281	10.4667	0.0041	1.3264	0.000000	1.7594	0.034159	1.973796	1.555317	-1.715849	-1.35206	7.8754	0.038936	-2.146722	5.9214	-5.147548	-2.738486
.77	0.0001	0.0300	11.1952	0.0082	1.3186	0.000001	1.7386	0.034159	2.216624	1.746662	-1.715849	-1.35206	8.8443	0.087279	-1.561522	6.6499	-5.147548	-2.738486
.78	0.0001	0.0277	10.3210	0.0123	1.3055	0.000002	1.7043	0.034159	1.92523	1.517049	-1.715849	-1.35206	7.6816	0.113334	-2.22623	5.7757	-5.147548	-2.738486
.79	0.0001	0.0269	10.0296	0.0163	1.2873	0.000004	1.6571	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	0.142827	-2.418734	5.4843	-5.147548	-2.738486
3.8	0.0005	0.0273	10.1753	0.0203	1.2640	0.000008	1.5977	0.233897	1.876664	1.478779	-1.782428	-1.404523	7.4879	0.182188	-2.517676	5.6300	-5.347285	-2.844746
.81	-0.0007	0.0273	10.1753	0.0242	1.2357	0.000014	1.5270	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	0.217037	-1.720887	5.6300	-4.748072	-2.525965
.82	0.0001	0.0257	9.5925	0.0279	1.2026	0.000022	1.4461	0.034159	1.682401	1.325704	-1.715849	-1.35206	6.7128	0.225043	-2.572793	5.0472	-5.147548	-2.738486
.83	-0.0003	0.0304	11.3409	0.0316	1.1646	0.000032	1.3564	-0.165579	2.26519	1.784931	-1.64927	-1.299597	9.0381	0.342832	-1.045492	6.7956	-4.94781	-2.632225
.84	-0.0011	0.0261	9.7382	0.0352	1.1221	0.000043	1.2592	-0.565055	1.730967	1.363973	-1.516111	-1.19467	6.9065	0.291384	-1.630921	5.1929	-4.548334	-2.419705
.85	0.0001	0.0281	10.4667	0.0386	1.0752	0.000057	1.1561	0.034159	1.973796	1.555317	-1.715849	-1.35206	7.8754	0.364479	-1.740169	5.9214	-5.147548	-2.738486
.86	0.0005	0.0288	10.7581	0.0418	1.0240	0.000073	1.0487	0.233897	2.070927	1.631855	-1.782428	-1.404523	8.2630	0.41471	-1.684044	6.2128	-5.347285	-2.844746
.87	-0.0007	0.0261	9.7382	0.0449	0.9688	0.000091	0.9386	-0.365317	1.730967	1.363973	-1.582691	-1.247133	6.9065	0.372258	-1.601603	5.1929	-4.748072	-2.525965
.88	-0.0015	0.0273	10.1753	0.0478	0.9098	0.000109	0.8277	-0.764792	1.876664	1.478779	-1.449532	-1.142206	7.4879	0.429781	-0.903562	5.6300	-4.348596	-2.313445
.89	-0.0007	0.0265	9.8839	0.0506	0.8472	0.000129	0.7177	-0.365317	1.779533	1.402242	-1.582691	-1.247133	7.1003	0.430763	-1.326909	5.3386	-4.748072	-2.525965
3.9	-0.0019	0.0308	11.4866	0.0531	0.7812	0.000150	0.6103	-0.96453	2.313756	1.8232	-1.382953	-1.089743	9.2319	0.588067	-0.009298	6.9413	-4.148858	-2.207184
.91	-0.0007	0.0249	9.3012	0.0554	0.7121	0.000170	0.5071	-0.365317	1.58527	1.249166	-1.582691	-1.247133	6.3252	0.4205	-1.362769	4.7558	-4.748072	-2.525965
.92	-0.0003	0.0253	9.4468	0.0575	0.6403	0.000190	0.4099	-0.165579	1.633836	1.287435	-1.64927	-1.299597	6.5190	0.449797	-1.297534	4.9015	-4.94781	-2.632225
.93	-0.0011	0.0285	10.6124	0.0594	0.5659	0.000209	0.3202	-0.565055	2.022361	1.593586	-1.516111	-1.19467	8.0692	0.574879	-0.527617	6.0671	-4.548334	-2.419705
.94	0.0021	0.0245	9.1555	0.0610	0.4893	0.000227	0.2394	1.032849	1.536705	1.210897	-2.048746	-1.614377	6.1314	0.44887	-1.662792	4.6101	-6.146237	-3.269787
.95	0.0001	0.0265	9.8839	0.0624	0.4107	0.000243	0.1687	0.034159	1.779533	1.402242	-1.715849	-1.35206	7.1003	0.531697	-0.807336	5.3386	-5.147548	-2.738486

9.13	-0.0007	0.0281	10.4667	0.0449	-0.9688	0.000091	0.9386	-0.365317	1.973796	1.555317	-1.582691	-1.247133	7.8754	0.42448	1.180963	5.9214	-4.748072	-2.525965
9.14	-0.0015	0.0296	11.0495	0.0418	-1.0240	0.000073	1.0487	-0.764792	2.168058	1.708393	-1.449532	-1.142206	8.6505	0.434161	0.483497	6.5042	-4.348596	-2.313445
9.15	-0.0003	0.0300	11.1952	0.0386	-1.0752	0.000057	1.1561	-0.165579	2.216624	1.746662	-1.64927	-1.299597	8.8443	0.40932	1.058577	6.6499	-4.94781	-2.632225
9.16	0.0005	0.0242	9.0098	0.0352	-1.1221	0.000043	1.2592	0.233897	1.488139	1.172628	-1.782428	-1.404523	5.9377	0.250507	3.014669	4.4644	-5.347285	-2.844746
9.17	-0.0019	0.0253	9.4468	0.0316	-1.1646	0.000032	1.3564	-0.96453	1.633836	1.287435	-1.382953	-1.089743	6.5190	0.247278	1.429707	4.9015	-4.148858	-2.207184
9.18	0.0017	0.0281	10.4667	0.0279	-1.2026	0.000022	1.4461	0.833111	1.973796	1.555317	-1.982166	-1.561913	7.8754	0.264021	2.907035	5.9214	-5.946499	-3.163526
9.19	-0.0003	0.0316	11.7780	0.0242	-1.2357	0.000014	1.5270	-0.165579	2.410887	1.899738	-1.64927	-1.299597	9.6194	0.27882	0.787377	7.2327	-4.94781	-2.632225
9.2	-0.0003	0.0257	9.5925	0.0203	-1.2640	0.000008	1.5977	-0.165579	1.682401	1.325704	-1.64927	-1.299597	6.7128	0.163329	2.451774	5.0472	-4.94781	-2.632225
9.21	-0.0003	0.0269	10.0296	0.0163	-1.2873	0.000004	1.6571	-0.165579	1.828099	1.440511	-1.64927	-1.299597	7.2941	0.142827	2.161614	5.4843	-4.94781	-2.632225
9.22	-0.0007	0.0269	10.0296	0.0123	-1.3055	0.000002	1.7043	-0.365317	1.828099	1.440511	-1.582691	-1.247133	7.2941	0.107616	1.931439	5.4843	-4.748072	-2.525965
9.23	0.0005	0.0277	10.3210	0.0082	-1.3186	0.000001	1.7386	0.233897	1.92523	1.517049	-1.782428	-1.404523	7.6816	0.075805	2.511869	5.7757	-5.347285	-2.844746
9.24	-0.0015	0.0277	10.3210	0.0041	-1.3264	0.000000	1.7594	-0.764792	1.92523	1.517049	-1.449532	-1.142206	7.6816	0.037978	1.202156	5.7757	-4.348596	-2.313445
9.25	-0.0015	0.0269	10.0296	0.0000	-1.3290	0.000000	1.7664	-0.764792	1.828099	1.440511	-1.449532	-1.142206	7.2941	5.51E-13	1.435347	5.4843	-4.348596	-2.313445
9.26	-0.0019	0.0281	10.4667	-0.0041	-1.3264	0.000000	1.7594	-0.96453	1.973796	1.555317	-1.382953	-1.089743	7.8754	-0.038936	0.822041	5.9214	-4.148858	-2.207184
9.27	-0.0011	0.0277	10.3210	-0.0082	-1.3186	-0.000001	1.7386	-0.565055	1.92523	1.517049	-1.516111	-1.19467	7.6816	-0.075805	1.458402	5.7757	-4.548334	-2.419705
9.28	-0.0003	0.0296	11.0495	-0.0123	-1.3055	-0.000002	1.7043	-0.165579	2.168058	1.708393	-1.64927	-1.299597	8.6505	-0.127629	1.398659	6.5042	-4.94781	-2.632225
9.29	0.0009	0.0273	10.1753	-0.0163	-1.2873	-0.000004	1.6571	0.433635	1.876664	1.478779	-1.849008	-1.456987	7.4879	-0.146621	2.821193	5.6300	-5.547023	-2.951006
9.3	-0.0011	0.0304	11.3409	-0.0203	-1.2640	-0.000008	1.5977	-0.565055	2.26519	1.784931	-1.516111	-1.19467	9.0381	-0.219907	0.629738	6.7956	-4.548334	-2.419705
9.31	0.0021	0.0277	10.3210	-0.0242	-1.2357	-0.000014	1.5270	1.032849	1.92523	1.517049	-2.048746	-1.614377	7.6816	-0.222653	3.341314	5.7757	-6.146237	-3.269787
9.32	-0.0007	0.0308	11.4866	-0.0279	-1.2026	-0.000022	1.4461	-0.365317	2.313756	1.8232	-1.582691	-1.247133	9.2319	-0.309495	0.734899	6.9413	-4.748072	-2.525965
9.33	-0.0007	0.0277	10.3210	-0.0316	-1.1646	-0.000032	1.3564	-0.365317	1.92523	1.517049	-1.582691	-1.247133	7.6816	-0.29138	1.520789	5.7757	-4.748072	-2.525965
9.34	-0.0015	0.0261	9.7382	-0.0352	-1.1221	-0.000043	1.2592	-0.764792	1.730967	1.363973	-1.449532	-1.142206	6.9065	-0.291384	1.406786	5.1929	-4.348596	-2.313445
9.35	-0.0003	0.0261	9.7382	-0.0386	-1.0752	-0.000057	1.1561	-0.165579	1.730967	1.363973	-1.64927	-1.299597	6.9065	-0.319639	1.992237	5.1929	-4.94781	-2.632225
9.36	-0.0027	0.0300	11.1952	-0.0418	-1.0240	-0.000073	1.0487	-1.364006	2.216624	1.746662	-1.249794	-0.984816	8.8443	-0.443887	-0.219047	6.6499	-3.749382	-1.994664
9.37	0.0001	0.0273	10.1753	-0.0449	-0.9688	-0.000091	0.9386	0.034159	1.876664	1.478779	-1.715849	-1.35206	7.4879	-0.403591	1.736244	5.6300	-5.147548	-2.738486
9.38	-0.0011	0.0304	11.3409	-0.0478	-0.9098	-0.000109	0.8277	-0.565055	2.26519	1.784931	-1.516111	-1.19467	9.0381	-0.518758	0.45327	6.7956	-4.548334	-2.419705
9.39	-0.0023	0.0269	10.0296	-0.0506	-0.8472	-0.000129	0.7177	-1.164268	1.828099	1.440511	-1.316373	-1.03728	7.2941	-0.442519	0.576504	5.4843	-3.94912	-2.100924
9.4	-0.0007	0.0273	10.1753	-0.0531	-0.7812	-0.000150	0.6103	-0.365317	1.876664	1.478779	-1.582691	-1.247133	7.4879	-0.476975	1.087909	5.6300	-4.748072	-2.525965
9.41	-0.0003	0.0288	10.7581	-0.0554	-0.7121	-0.000170	0.5071	-0.165579	2.070927	1.631855	-1.64927	-1.299597	8.2630	-0.549323	0.886629	6.2128	-4.94781	-2.632225
9.42	0.0001	0.0269	10.0296	-0.0575	-0.6403	-0.000190	0.4099	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	-0.503278	1.203029	5.4843	-5.147548	-2.738486
9.43	0.0009	0.0277	10.3210	-0.0594	-0.5659	-0.000209	0.3202	0.433635	1.92523	1.517049	-1.849008	-1.456987	7.6816	-0.547268	1.19103	5.7757	-5.547023	-2.951006
9.44	-0.0007	0.0242	9.0098	-0.0610	-0.4893	-0.000227	0.2394	-0.365317	1.488139	1.172628	-1.582691	-1.247133	5.9377	-0.434684	1.02122	4.4644	-4.748072	-2.525965
9.45	-0.0007	0.0292	10.9038	-0.0624	-0.4107	-0.000243	0.1687	-0.365317	2.119493	1.670124	-1.582691	-1.247133	8.4567	-0.633272	0.393634	6.3585	-4.748072	-2.525965
9.46	0.0001	0.0269	10.0296	-0.0636	-0.3305	-0.000257	0.1092	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	-0.556273	0.621025	5.4843	-5.147548	-2.738486
9.47	0.0007	0.0296	11.0495	-0.0645	-0.2490	-0.000268	0.0620	0.365317	2.168058	1.708393	-1.582691	-1.247133	8.6505	-0.669054	0.217066	6.5042	-4.748072	-2.525965

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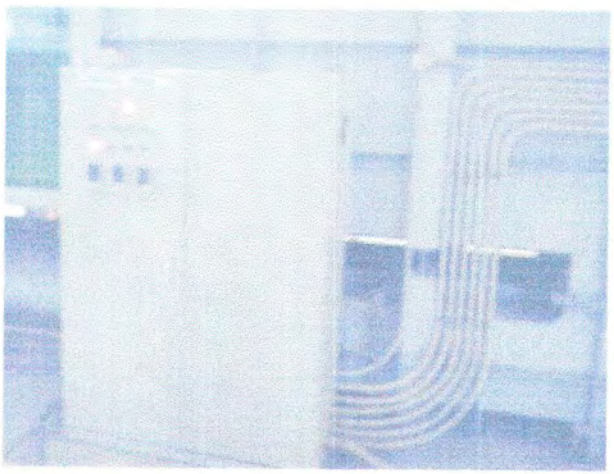
.64	0.0001	0.0296	11.0495	-0.0418	1.0240	-0.000073	1.0487	0.034159	2.168058	1.708393	-1.715849	-1.35206	8.6505	-0.434161	-1.301659	6.5042	-5.147548	-2.738486
.65	0.0009	0.0281	10.4667	-0.0386	1.0752	-0.000057	1.1561	0.433635	1.973796	1.555317	-1.849008	-1.456987	7.8754	-0.364479	-2.169692	5.9214	-5.547023	-2.951006
.66	-0.0003	0.0292	10.9038	-0.0352	1.1221	-0.000043	1.2592	-0.165579	2.119493	1.670124	-1.64927	-1.299597	8.4567	-0.356786	-1.299662	6.3585	-4.94781	-2.632225
.67	0.0013	0.0269	10.0296	-0.0316	1.1646	-0.000032	1.3564	0.633373	1.828099	1.440511	-1.915587	-1.50945	7.2941	-0.276679	-2.886175	5.4843	-5.746761	-3.057266
.68	-0.0003	0.0288	10.7581	-0.0279	1.2026	-0.000022	1.4461	-0.165579	2.070927	1.631855	-1.64927	-1.299597	8.2630	-0.277014	-1.497211	6.2128	-4.94781	-2.632225
.69	-0.0015	0.0269	10.0296	-0.0242	1.2357	-0.000014	1.5270	-0.764792	1.828099	1.440511	-1.449532	-1.142206	7.2941	-0.21142	-1.334552	5.4843	-4.348596	-2.313445
9.7	-0.0003	0.0288	10.7581	-0.0203	1.2640	-0.000008	1.5977	-0.165579	2.070927	1.631855	-1.64927	-1.299597	8.2630	-0.201048	-1.573707	6.2128	-4.94781	-2.632225
.71	-0.0011	0.0288	10.7581	-0.0163	1.2873	-0.000004	1.6571	-0.565055	2.070927	1.631855	-1.516111	-1.19467	8.2630	-0.161799	-1.088468	6.2128	-4.548334	-2.419705
.72	-0.0007	0.0288	10.7581	-0.0123	1.3055	-0.000002	1.7043	-0.365317	2.070927	1.631855	-1.582691	-1.247133	8.2630	-0.121911	-1.364626	6.2128	-4.748072	-2.525965
.73	0.0005	0.0273	10.1753	-0.0082	1.3186	-0.000001	1.7386	0.233897	1.876664	1.478779	-1.782428	-1.404523	7.4879	-0.073893	-2.626367	5.6300	-5.347285	-2.844746
.74	-0.0011	0.0257	9.5925	-0.0041	1.3264	0.000000	1.7594	-0.565055	1.682401	1.325704	-1.516111	-1.19467	6.7128	-0.033188	-2.042989	5.0472	-4.548334	-2.419705
.75	-0.0003	0.0265	9.8839	0.0000	1.3290	0.000000	1.7664	-0.165579	1.779533	1.402242	-1.64927	-1.299597	7.1003	-5.74E-13	-2.347134	5.3386	-4.94781	-2.632225
.76	-0.0003	0.0273	10.1753	0.0041	1.3264	0.000000	1.7594	-0.165579	1.876664	1.478779	-1.64927	-1.299597	7.4879	0.03702	-2.112145	5.6300	-4.94781	-2.632225
.77	-0.0007	0.0245	9.1555	0.0082	1.3186	0.000001	1.7386	-0.365317	1.536705	1.210897	-1.582691	-1.247133	6.1314	0.060507	-2.637743	4.6101	-4.748072	-2.525965
.78	0.0005	0.0281	10.4667	0.0123	1.3055	0.000002	1.7043	0.233897	1.973796	1.555317	-1.782428	-1.404523	7.8754	0.116193	-2.373625	5.9214	-5.347285	-2.844746
.79	0.0001	0.0269	10.0296	0.0163	1.2873	0.000004	1.6571	0.034159	1.828099	1.440511	-1.715849	-1.35206	7.2941	0.142827	-2.418734	5.4843	-5.147548	-2.738486
9.8	0.0001	0.0277	10.3210	0.0203	1.2640	0.000008	1.5977	0.034159	1.92523	1.517049	-1.715849	-1.35206	7.6816	0.186903	-2.155449	5.7757	-5.147548	-2.738486
.81	0.0009	0.0269	10.0296	0.0242	1.2357	0.000014	1.5270	0.433635	1.828099	1.440511	-1.849008	-1.456987	7.2941	0.21142	-2.815463	5.4843	-5.547023	-2.951006
.82	-0.0015	0.0269	10.0296	0.0279	1.2026	0.000022	1.4461	-0.764792	1.828099	1.440511	-1.449532	-1.142206	7.2941	0.244532	-1.298741	5.4843	-4.348596	-2.313445
.83	0.0009	0.0300	11.1952	0.0316	1.1646	0.000032	1.3564	0.433635	2.216624	1.746662	-1.849008	-1.456987	8.8443	0.335482	-1.844497	6.6499	-5.547023	-2.951006
.84	-0.0011	0.0269	10.0296	0.0352	1.1221	0.000043	1.2592	-0.565055	1.828099	1.440511	-1.516111	-1.19467	7.2941	0.307734	-1.436039	5.4843	-4.548334	-2.419705
.85	0.0013	0.0288	10.7581	0.0386	1.0752	0.000057	1.1561	0.633373	2.070927	1.631855	-1.915587	-1.50945	8.2630	0.382415	-2.197722	6.2128	-5.746761	-3.057266
.86	0.0009	0.0292	10.9038	0.0418	1.0240	0.000073	1.0487	0.433635	2.119493	1.670124	-1.849008	-1.456987	8.4567	0.424436	-1.799662	6.3585	-5.547023	-2.951006
.87	-0.0011	0.0285	10.6124	0.0449	0.9688	0.000091	0.9386	-0.565055	2.022361	1.593586	-1.516111	-1.19467	8.0692	0.434925	-0.903323	6.0671	-4.548334	-2.419705
.88	-0.0015	0.0261	9.7382	0.0478	0.9098	0.000109	0.8277	-0.764792	1.730967	1.363973	-1.449532	-1.142206	6.9065	0.396414	-1.140565	5.1929	-4.348596	-2.313445
.89	0.0001	0.0300	11.1952	0.0506	0.8472	0.000129	0.7177	0.034159	2.216624	1.746662	-1.715849	-1.35206	8.8443	0.536567	-1.003263	6.6499	-5.147548	-2.738486
9.9	-0.0007	0.0249	9.3012	0.0531	0.7812	0.000150	0.6103	-0.365317	1.58527	1.249166	-1.582691	-1.247133	6.3252	0.402914	-1.494915	4.7558	-4.748072	-2.525965
.91	0.0009	0.0316	11.7780	0.0554	0.7121	0.000170	0.5071	0.433635	2.410887	1.899738	-1.849008	-1.456987	9.6194	0.639499	-0.880484	7.2327	-5.547023	-2.951006
.92	-0.0019	0.0277	10.3210	0.0575	0.6403	0.000190	0.4099	-0.96453	1.92523	1.517049	-1.382953	-1.089743	7.6816	0.530018	-0.452402	5.7757	-4.148858	-2.207184
.93	-0.0003	0.0281	10.4667	0.0594	0.5659	0.000209	0.3202	-0.165579	1.973796	1.555317	-1.64927	-1.299597	7.8754	0.561073	-0.80281	5.9214	-4.94781	-2.632225
.94	0.0001	0.0296	11.0495	0.0610	0.4893	0.000227	0.2394	0.034159	2.168058	1.708393	-1.715849	-1.35206	8.6505	0.633288	-0.621887	6.5042	-5.147548	-2.738486
.95	0.0021	0.0261	9.7382	0.0624	0.4107	0.000243	0.1687	1.032849	1.730967	1.363973	-2.048746	-1.614377	6.9065	0.517186	-1.253157	5.1929	-6.146237	-3.269787
.96	-0.0007	0.0245	9.1555	0.0636	0.3305	0.000257	0.1092	-0.365317	1.536705	1.210897	-1.582691	-1.247133	6.1314	0.467605	-0.661194	4.6101	-4.748072	-2.525965
.97	-0.0015	0.0288	10.7581	0.0645	0.2490	0.000268	0.0620	-0.764792	2.070927	1.631855	-1.449532	-1.142206	6.6104	0.63908	-0.160832	6.2128	-4.348596	-2.313445

LAMPIRAN III

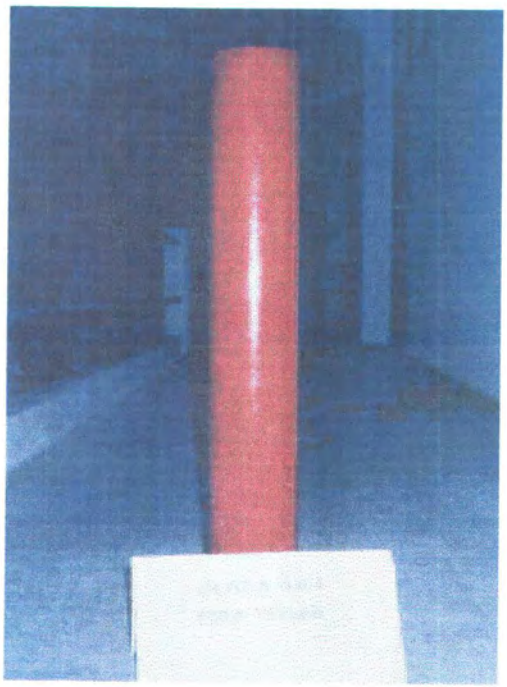
Tabel persentase perbedaan percobaan dengan hasil yang sudah dipublikasikan

		dari flume tank				
cd silinder		nilai perc.	nilai perc.	%	%	
titik xawal	titik xakhir	titik awal	titik akhir	titik awal	titik akhir	
0.72	2.1	1.47	1.69	51.02041	-24.26036	Sarpkaya
1.15	1.9	1.47	1.69	21.76871	-12.42604	Bearman
1.55	1.7	1.47	1.69	-5.442177	-0.591716	Indiyono
cd potongan kaki jaket dibanding dengan Indiyono						
1.74	1.97	1.81	1.8986	3.867403	-3.760666	nol
2.1	2.18	2.048	2.1713	-2.539063	-0.400682	45
2.21	2.54	2.2	2.34	-0.454545	-8.547009	90
cm silinder						
2.09	1.15	2.034	1.615	-2.753196	28.79257	Sarpkaya
1.99	1.55	2.034	1.615	2.163225	4.024768	Bearman
1.99	1.48	2.034	1.615	2.163225	8.359133	Indiyono
cm potongan kaki jaket dibanding dengan Indiyono						
2.1	1.77	2.0086	1.775	-4.550433	16.62741	nol
2.24	1.65	2.123	1.897	-5.511069	13.02056	45
2.35	1.98	2.213	2.042	-6.190691	3.036239	90
cl silinder						
2.21	2.55	1.501	2.134	-47.23518	-19.49391	Sarpkaya
0.77	1.39	1.501	2.134	48.70087	34.8641	Cakrabarti
1.64	2.2	1.501	2.134	-9.260493	-3.092784	Indiyono
cl potongan kaki jaket dibanding dengan Indiyono						
1.89	2.42	1.837	2.231	-2.885139	-8.471537	nol
2.07	2.44	2.156	2.42	3.988868	-0.826446	45
2.18	2.8	2.26	2.67	3.539823	-4.868914	90

Gambar Running untuk percobaan



Gambar Box Kontrol panel



Gambar Model Silinder

Gambar model Potongan Kaki jaket

Gambar Percobaan Posisi 0 drajat

posisi 90 drajat

Gambar percobaan posisi 45 drajat

Gambar Percobaan Posisi 90 drajat

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INSTITUT TEKNOLOGI SEPULUH NOPEMER
FAKULTAS TEKNOLOGI KELAUTAN
JURUSAN TEKNIK KELAUTAN

LEMBAR KEMAJUAN DAN ASISTENSI TUGAS AKHIR

NAMA MAHASISWA : TEGUH SUGIHARTONO

NRP : 4398.100.007

DOSEN PEMBIMBING II : Ir. JUSUF SUTOMO, MSc

Judul Tugas Akhir : ANALISA GAYA GELOMBANG PADA STRUKTUR JACKET DENGAN PERCOBAAN PADA FLUME TANK

TANGGAL	CATATAN	TANDA TANGAN
20-2-2003	Bab I Pendahuluan	
18-3-2003	Lanjutkan Bab II	
25-3-2003	Bab III metodologi	
15-9-2003	Konsultasi Pemisahan drag dan inersia	
13-10-2003	Pemisahan hasil aliran drag	
20-10-2003	Hasil grafik Cd, Cm, Cl	
14 – 11 -2003	Draft laporan akhir	

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INSTITUT TEKNOLOGI SEPULUH NOPEMER
FAKULTAS TEKNOLOGI KELAUTAN
JURUSAN TEKNIK KELAUTAN

LEMBAR KEMAJUAN DAN ASISTENSI TUGAS AKHIR

NAMA MAHASISWA : TEGUH SUGIHARTONO

NRP : 4398.100.007

DOSEN PEMBIMBING I : Dr. Ir PAULUS INDIYONO, MSc

Judul Tugas Akhir : ANALISA GAYA GELOMBANG PADA STRUKTUR JACKET DENGAN PERCOBAAN PADA FLUME TANK

TANGGAL	CATATAN	TANDA TANGAN
26 – 2 - 2003	Pendahuluan dan langkah percobaan	
5 – 3- 2003	Konsultasi pembuatan model dan pemberian ukuran-ukuran model	
17 – 4 - 2003	Selesai pembuatan model dan konsultasi rangkaian pengukur strain gauge	
4 – 5 - 2003	Konsultasi pembuatan alat ukur dari strain gauge	
3 - 6 -2003	Alat ukur selesai dibuat	
6 – 6 - 2003	Persiapan percobaan dan perlengkapannya	
10 – 7 -2003	Bab I dan Bab II	
29 – 7 -2003	Bab III	
4 – 8 -2003	Perbaikan bab III dan Konsultasi hasil percobaan	
20-10-2003	Bab IV Hasil dan pembahasan	
3-11-2003	Perbaikan hasil dan pembahasan dan Bab V kesimpulan	
29-12-2003	Perbaikan Abstrak	