



American Concrete Institute

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Column Interaction Diagram Spreadsheet

Column Interaction Diagram Spreadsheet - Introduction

This spreadsheet is an educational module that shows how axial and flexural stresses are combined to produce a nominal and design strength curve for a rectangular reinforced concrete column. A detailed explanation of the calculations are given in Columns Example 1. This content of this spreadsheet is separated into several sheets by topic. To navigate to the different topics, select the tabs at the bottom of the page.

Input fields are have a blue background. The rest of the cells in the spreadsheet are locked but the formulas in the cell are visible for the users information. A brief description of the topics are provided below:

Introduction (Sheet 1) — A description of the content of the Column Interaction Diagram Spreadsheet.

Terms of Use (Sheet 2) — The legal terms and condition of use of this Column Interaction Diagram Spreadsheet are stated. All users of this educational material must agree to these terms before using the content herein.

Inputs (Sheet 3) — This spreadsheet analyzes rectangular columns with ties. The analysis is for one axis along the "h" dimension. The number of layers refers to the number of bars in the "h" direction. Layer 1 is always placed as close as possible to the face of the concrete that creates the greatest value for "d." If two layers are entered, the next layer is placed as close as possible to the face of the concrete that creates the lowest value for "d." For more than two layers, the additional layers are evenly spaced between the outer layers and numbered in order from the greatest value of "d" to the lowest. The remaining inputs are self explanatory. Note that one value of f_y is used for both the longitudinal and transverse reinforcement.

Critical Diagram Points (Sheet 4) — Five key points of the interaction diagram are calculated on this page: pure compression, pure tension, pure bending, balanced point, strain at the extreme tension reinforcement is zero, and strain at the extreme tension reinforcement is half the yield strain. The calculations and descriptions are given.

Select Axial Load (Sheet 5) — This sheet allows the user to input an axial load. The related moment on the interaction diagram is calculated. This is helpful when designing columns in intermediate and special moment frames, where the nominal or probable moment must be determined.

Interaction Diagram Points (Sheet 6) — Calculation of the data points on the interaction diagram are shown on this sheet.

Nominal Diagram (Sheet 7) — The nominal strength interaction diagram is plotted on this sheet. The five critical diagram and input points are also shown.

Design Diagram (Sheet 8) — The design strength interaction diagram is plotted on this sheet. The five critical diagram and input points are also shown.

Rebar Database (Sheet 9) — This is a reference sheet that contains a table of reinforcing steel variables used by the formulas throughout the spreadsheet.

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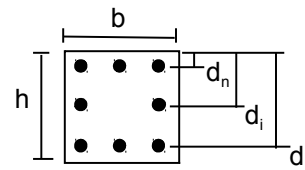
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Inputs

Section Properties and Geometry	
No. layers:	3
$f'_c =$	5,000 psi
$\beta_1 =$	0.80
$b =$	24 in.
$h =$	24 in.
$f_y =$	60 ksi
$E_s =$	29,000 ksi
Tie bar size:	4
Cl. cover to tie =	1.50 in.
Long. bar size:	8

Number of Bars Per Layer			
Layer	d_i (in.)	No. long. bars	A_{si} (in. ²)
3	2.500	3	2.37
2	12.000	2	1.58
1	21.500	3	2.37
	0.000		0.00
	0.000		0.00
	0.000		0.00
	0.000		0.00
	0.000		0.00
	0.000		0.00
	0.000		0.00
	0.000		0.00
Σ			6.32

Bar Spacing Checks		
$d_i =$	21.50 in.	
c/c bar sp. (h) =	9.50 in.	OK
c/c bar sp. (b) =	9.50 in.	OK
Min. cl. sp. (in.) =	1.50 in.	(7.6.3)



Strain Definitions	
$f_y/E =$	0.00207
$\epsilon_{cu} =$	0.003
Ductile Strain =	-0.005
Brittle Strain =	-0.002
$\phi_{\text{tension-controlled}} =$	0.9
$\phi_{\text{comp controlled}} =$	0.65

Input section geometry including number of bars in the highlighted regions.

Sheet will check to ensure bar spacing is adequate.

Pure Compression

$$\begin{aligned}\phi &= 0.65 \\ P_o &= 2,800.3 \text{ kips} \\ \phi P_o &= 1,820.2 \text{ kips}\end{aligned}$$

$$\phi P_{n(max)} = 1,456.2 \text{ kips}$$

$$P = 0.8(0.85f_c' A_c + f_y A_g = 0.85f_c' (A_g - A_{st}) + f_y A_{st})$$

$$\phi = 0.65 \text{ (Compression Controlled)}$$

Calculation assumes that column has appropriate ties and confinement to ACI 318 specifications.

This point corresponds to the ACI maximum allowable load with a minimum eccentricity of 20%

Pure Tension

$$\begin{aligned}\phi &= 0.9 \\ P_{nt} &= -379.2 \text{ kips}\end{aligned}$$

$$\phi P_{nt} = -341.3 \text{ kips}$$

$$P = f_y A_{st}$$

$$\phi = 0.9 \text{ (Tension Controlled)}$$

This point corresponds to the maximum tensile capacity of the steel within the concrete section.

Pure Bending

$f'_c =$ 5,000 psi
 $\beta_1 =$ 0.80
 $b =$ 24 in.
 $h =$ 24 in.
 $f_y =$ 60 ksi
 $E_s =$ 29,000 ksi
 $A_{s,min} =$ 0.00 in.²
 $A_{s,max} =$ 0.00 in.²
 $\epsilon_t =$ -0.00207
 $\epsilon_{cu} =$ 0.003

$Z =$ -8.56871
 $\epsilon_t =$ -0.0177284
 $c =$ 3.11 in.
 $a =$ 2.49 in.

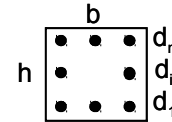
$P_n =$ 0.0 kips
 $M_n =$ 364.3 ft-kips

$\phi =$ 0.900

$\phi P_n =$ 0.0 kips
 $\phi M_n =$ 327.8 ft-kips

Note: Compression is positive

$C_c =$ 253.9 kips
 $M C_c =$ 227.6 kips



Pure Bending Point

1.) The pure bending point is where the interaction diagram crosses the x-axis (moment axis), where the axial load capacity is zero.

Steel Data

Layer	d_i (in.)	A_{si} (in. ²)	ϵ_{si} (in./in.)	f_{si} (ksi)	F_{si} (kips)	d_{si} (in)	M_{nsi} (ft-kips)
3	2.500	2.37	0.00059	12.9	30.5	9.5	24.1
2	12.000	1.58	-0.00207	-60.0	-94.8	0.0	0.0
1	21.500	2.37	-0.00207	-60.0	-142.2	-9.5	112.6
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	Σ	6.32			-206.5		136.69

Balanced Point

$$f'_c = 5,000 \text{ psi}$$

$$\beta_1 = 0.80$$

$$b = 24 \text{ in.}$$

$$h = 24 \text{ in.}$$

$$f_y = 60 \text{ ksi}$$

$$E_s = 29,000 \text{ ksi}$$

$$A_{s,min} = 0.000 \text{ in.}^2$$

$$A_{s,max} = 0.000 \text{ in.}^2$$

$$\epsilon_t = -0.00207$$

$$\epsilon_{cu} = 0.003$$

$$c = 12.72 \text{ in.}$$

$$a = 10.1796 \text{ in.}$$

$$P_{nb} = 1,029.4 \text{ kips}$$

$$M_{nb} = 815.1 \text{ ft-kips}$$

$$\phi = 0.65$$

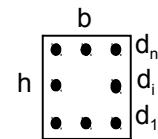
$$\phi P_{nb} = 669.1 \text{ kips}$$

$$\phi M_{nb} = 529.8 \text{ ft-kips}$$

Note: Compression is positive

$$C_c = 1,038.3 \text{ kips}$$

$$M_{concrete} = 597.9$$



At Balanced Point

1.) At balanced point, extreme layer of tension steel yields at the same load as the concrete reaches its maximum usable strain.

Steel Data

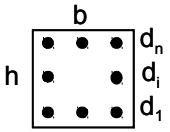
Layer	d_i (in.)	A_{si} (in. ²)	ϵ_{si} (in./in.)	f_{si} (ksi)	Fsi (kips)	dsi (in)	M_{nsi} (ft-kips)
3	2.500	2.37	0.00207	55.8	132.1	9.5	104.6
2	12.000	1.58	0.00017	0.7	1.1	0.0	0.0
1	21.500	2.37	-0.00207	-60.0	-142.2	-9.5	112.6
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	Σ	6.32			-9.0		217.18



Documents

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Stress = 0 fy

$f'_c =$	5,000 psi	$Z =$	0.0		
$\beta_1 =$	0.80	$\epsilon_t =$	0.0		
$b =$	24 in.	$c =$	21.50 in.	Note: Compression is positive	
$h =$	24 in.	$a =$	17.20 in.		
$f_y =$	60 ksi	$P_n =$	1,940.6 kips	$C_c =$	1,754.4 kips
$E_s =$	29,000 ksi	$M_n =$	601.7 ft-kips	$M C_c =$	497.1 kips
$A_{s,min} =$	0.000 in. ²	$\phi =$	0.650		
$A_{s,max} =$	0.000 in. ²	$\phi P_n =$	1,261.4 kips		
$\epsilon_t =$	-0.00207	$\phi M_n =$	391.1 ft-kips		
$\epsilon_{cu} =$	0.003				

Steel Data

Layer	d_i (in.)	A_{si} (in. ²)	ϵ_{si} (in./in.)	f_{si} (ksi)	F_{si} (kips)	d_{si} (in)	M_{nsi} (ft-kips)
3	2.500	2.37	0.00207	55.8	132.1	9.5	104.6
2	12.000	1.58	0.00133	34.2	54.0	0.0	0.0
1	21.500	2.37	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	Σ	6.32			186.2		104.60

At $z=0$:

1.) Strain in extreme tension layer is zero. Once tension develops in this layer, tension lap splices are required. Compression lap splices are no longer allowed.

Stress = 0.5 fy

$f'_c = 5,000$ psi
 $\beta_1 = 0.80$
 $b = 24$ in.
 $h = 24$ in.
 $f_y = 60$ ksi
 $E_s = 29,000$ ksi
 $A_{s,min} = 0.000$ in.²
 $A_{s,max} = 0.000$ in.²
 $\epsilon_t = -0.00207$
 $\epsilon_{cu} = 0.003$

$Z = 0.5$
 $\epsilon_t = 0.00103$
 $c = 15.99$ in.
 $a = 12.79$ in.

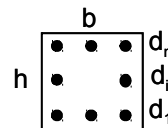
$P_n = 1,393.1$ kips
 $M_n = 770.2$ ft-kips

$\phi = 0.650$

$\phi P_n = 905.5$ kips
 $\phi M_n = 500.7$ ft-kips

Note: Compression is positive

$C_c = 1,304.6$ kips
 $M C_c = 609.3$ kips



At $z=0.5 \epsilon_y$:

1.) Length of tension lap splices are changed after the strain in the tension steel reaches $0.5 \epsilon_y$.

Steel Data

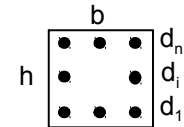
Layer	d_i (in.)	A_{si} (in. ²)	ϵ_{si} (in./in.)	f_{si} (ksi)	F_{si} (kips)	d_{si} (in)	M_{nsi} (ft-kips)
3	2.500	2.37	0.00207	55.8	132.1	9.5	104.6
2	12.000	1.58	0.00075	17.4	27.6	0.0	0.0
1	21.500	2.37	-0.00103	-30.0	-71.1	-9.5	56.3
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	Σ	6.32			88.6		160.89

Select Axial Load

$$\epsilon_t = -0.013457$$

a = 3.14 in.

Note: Compression is positive

$$M_{Cc} = 278.0 \text{ kips}$$

$$\phi = 0.900$$
$$\phi P_n = 90.0 \text{ kips}$$
$$\phi M_n = 397.6 \text{ ft-kips}$$
$$\beta_1 = 0.80$$

h = 24 in.

$$f_y = 60 \text{ ksi}$$
$$E_s = 29,000 \text{ ksi}$$
$$A_{s,min} = 0.00 \text{ in.}^2$$
$$A_{s,max} = 0.00 \text{ in.}^2$$
$$\varepsilon_t = 0.00207$$
$$\epsilon_{cu} = 0.003$$

Layer	d _i (in.)	A _{si} (in. ²)	ε _{si} (in./in.)	f _{si} (ksi)	F _{si}	dsi	M _{nsl} (ft-kips)
3	2.500	2.37	0.00109	27.3	64.6	9.5	51.1
2	12.000	1.58	-0.00207	-60.0	-94.8	0.0	0.0
1	21.500	2.37	-0.00207	-60.0	-142.2	-9.5	112.6
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	0.000	0.00	0.00000	0.0	0.0	0.0	0.0
	Σ	6.32			-172.4		163.71

1. Enter nominal strength value in the P_n box.
Spreadsheet will output data including:
 - a. Steel Strains/Stresses
 - b. ϕ
 - c. Nominal Moment Capacity
 - d. Design Axial Load and Moment Capacity.

Z (arbitrary)	1.000	0.990	0.980	0.970	0.960	0.950
ϵ_t	0.00207	0.00205	0.00203	0.00201	0.00199	0.00197
c	69.28	67.77	66.33	64.95	63.62	62.35
a	24.00	24.00	24.00	24.00	24.00	24.00
Cc	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
$\epsilon s1$	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
$\epsilon s2$	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
$\epsilon s3$	0.002069	0.002048	0.002028	0.002007	0.001986	0.001966
$\epsilon s4$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s5$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s6$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s7$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s8$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s9$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\epsilon s10$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Fs1	132.13	132.13	132.13	132.13	132.13	132.13
Fs2	132.13	132.13	132.13	132.13	132.13	132.13
Fs3	132.13	130.71	129.28	127.86	126.44	125.02
Fs4	0.00	0.00	0.00	0.00	0.00	0.00
Fs5	0.00	0.00	0.00	0.00	0.00	0.00
Fs6	0.00	0.00	0.00	0.00	0.00	0.00
Fs7	0.00	0.00	0.00	0.00	0.00	0.00
Fs8	0.00	0.00	0.00	0.00	0.00	0.00
Fs9	0.00	0.00	0.00	0.00	0.00	0.00
Fs10	0.00	0.00	0.00	0.00	0.00	0.00
d Concrete	0.00	0.00	0.00	0.00	0.00	0.00
d1	9.50	9.50	9.50	9.50	9.50	9.50
d2	0.00	0.00	0.00	0.00	0.00	0.00
d3	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
d4	0.00	0.00	0.00	0.00	0.00	0.00
d5	0.00	0.00	0.00	0.00	0.00	0.00
d6	0.00	0.00	0.00	0.00	0.00	0.00
d7	0.00	0.00	0.00	0.00	0.00	0.00
d8	0.00	0.00	0.00	0.00	0.00	0.00
d9	0.00	0.00	0.00	0.00	0.00	0.00
d10	0.00	0.00	0.00	0.00	0.00	0.00
Mn Concrete	0.00	0.00	0.00	0.00	0.00	0.00
Mn1	104.60	104.60	104.60	104.60	104.60	104.60
Mn2	0.00	0.00	0.00	0.00	0.00	0.00
Mn3	-104.60	-103.48	-102.35	-101.22	-100.10	-98.97
Mn4	0.00	0.00	0.00	0.00	0.00	0.00
Mn5	0.00	0.00	0.00	0.00	0.00	0.00
Mn6	0.00	0.00	0.00	0.00	0.00	0.00
Mn7	0.00	0.00	0.00	0.00	0.00	0.00
Mn8	0.00	0.00	0.00	0.00	0.00	0.00
Mn9	0.00	0.00	0.00	0.00	0.00	0.00
Mn10	0.00	0.00	0.00	0.00	0.00	0.00
Pn	2844.39	2842.97	2841.54	2840.12	2838.70	2837.28
Mn	0.00	1.13	2.25	3.38	4.50	5.63
ϕ	0.65	0.65	0.65	0.65	0.65	0.65



ϕP_n	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
ϕM_n	0.00	0.73	1.46	2.20	2.93	3.66

General Point Interpolation

Cell #	P	Z
	100.25	-6.50
607	100.00	-6.5044
	86.36	-6.75

Pure Bending Interpolation

Cell #	P	Z
	2.858206959	-8.5
615	0	-8.5687
	-7.54190577	-8.75

0.940	0.930	0.920	0.910	0.900	0.890	0.880
0.00194	0.00192	0.00190	0.00188	0.00186	0.00184	0.00182
61.13	59.95	58.82	57.73	56.68	55.67	54.69
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001945	0.001924	0.001903	0.001883	0.001862	0.001841	0.001821
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
132.13	132.13	132.13	132.13	132.13	132.13	132.13
123.60	122.17	120.75	119.33	117.91	116.49	115.06
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-97.85	-96.72	-95.59	-94.47	-93.34	-92.22	-91.09
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2835.86	2834.43	2833.01	2831.59	2830.17	2828.75	2827.32
6.75	7.88	9.01	10.13	11.26	12.38	13.51
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
4.39	5.12	5.85	6.59	7.32	8.05	8.78

phi	M
0.9	441.9270495
0.9000	441.9270
0.9	441.9270495

phi	M
0.9	366.5528617
0.9000	366.5529
0.9	366.5528617

0.870	0.860	0.850	0.840	0.830	0.820	0.810
0.00180	0.00178	0.00176	0.00174	0.00172	0.00170	0.00168
53.75	52.84	51.96	51.11	50.28	49.48	48.71
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001800	0.001779	0.001759	0.001738	0.001717	0.001697	0.001676
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
132.13	132.13	132.13	132.13	132.13	132.13	132.13
113.64	112.22	110.80	109.38	107.95	106.53	105.11
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-89.97	-88.84	-87.71	-86.59	-85.46	-84.34	-83.21
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2825.90	2824.48	2823.06	2821.64	2820.21	2818.79	2817.37
14.63	15.76	16.89	18.01	19.14	20.26	21.39
0.65	0.65	0.65	0.65	0.65	0.65	0.65

1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
9.51	10.24	10.98	11.71	12.44	13.17	13.90

0.800	0.790	0.780	0.770	0.760	0.750	0.740
0.00166	0.00163	0.00161	0.00159	0.00157	0.00155	0.00153
47.96	47.23	46.53	45.85	45.18	44.54	43.91
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001655	0.001634	0.001614	0.001593	0.001572	0.001552	0.001531
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
132.13	132.13	132.13	132.13	132.13	132.13	132.13
103.69	102.27	100.84	99.42	98.00	96.58	95.16
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-82.09	-80.96	-79.83	-78.71	-77.58	-76.46	-75.33
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2815.95	2814.53	2813.10	2811.68	2810.26	2808.84	2807.42
22.52	23.64	24.77	25.89	27.02	28.14	29.27
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
14.63	15.37	16.10	16.83	17.56	18.29	19.03

0.730	0.720	0.710	0.700	0.690	0.680	0.670
0.00151	0.00149	0.00147	0.00145	0.00143	0.00141	0.00139
43.30	42.71	42.13	41.57	41.02	40.49	39.97
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001510	0.001490	0.001469	0.001448	0.001428	0.001407	0.001386
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
132.13	132.13	132.13	132.13	132.13	132.13	132.13
93.73	92.31	90.89	89.47	88.05	86.62	85.20
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-74.21	-73.08	-71.95	-70.83	-69.70	-68.58	-67.45
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2805.99	2804.57	2803.15	2801.73	2800.31	2798.88	2797.46
30.40	31.52	32.65	33.77	34.90	36.02	37.15
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
19.76	20.49	21.22	21.95	22.68	23.42	24.15

0.660	0.650	0.640	0.630	0.620	0.610	0.600
0.00137	0.00134	0.00132	0.00130	0.00128	0.00126	0.00124
39.46	38.97	38.49	38.02	37.56	37.11	36.68
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002069	0.002069	0.002065	0.002053	0.002042	0.002030	0.002018
0.001366	0.001345	0.001324	0.001303	0.001283	0.001262	0.001241
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
132.13	132.13	131.83	131.04	130.24	129.45	128.66
83.78	82.36	80.94	79.51	78.09	76.67	75.25
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-66.33	-65.20	-64.07	-62.95	-61.82	-60.70	-59.57
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2796.04	2794.62	2792.90	2790.68	2788.47	2786.25	2784.04
38.28	39.40	40.53	41.65	42.78	43.90	45.03
0.65	0.65	0.65	0.65	0.65	0.65	0.65

1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
24.88	25.61	26.34	27.07	27.81	28.54	29.27

0.590	0.580	0.570	0.560	0.550	0.540	0.530
0.00122	0.00120	0.00118	0.00116	0.00114	0.00112	0.00110
36.25	35.83	35.43	35.03	34.64	34.26	33.89
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.002007	0.001995	0.001984	0.001972	0.001961	0.001949	0.001938
0.001221	0.001200	0.001179	0.001159	0.001138	0.001117	0.001097
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
127.86	127.07	126.27	125.48	124.69	123.89	123.10
73.83	72.40	70.98	69.56	68.14	66.72	65.29
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-58.45	-57.32	-56.19	-55.07	-53.94	-52.82	-51.69
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2781.82	2779.60	2777.39	2775.17	2772.96	2770.74	2768.53
46.16	47.28	48.41	49.53	50.66	51.78	52.91
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
30.00	30.73	31.46	32.20	32.93	33.66	34.39

0.520	0.510	0.500	0.490	0.480	0.470	0.460
0.00108	0.00106	0.00103	0.00101	0.00099	0.00097	0.00095
33.52	33.16	32.82	32.47	32.14	31.81	31.49
24.00	24.00	24.00	24.00	24.00	24.00	24.00
2448.00	2448.00	2448.00	2448.00	2448.00	2448.00	2448.00
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001926	0.001915	0.001903	0.001891	0.001880	0.001868	0.001857
0.001076	0.001055	0.001034	0.001014	0.000993	0.000972	0.000952
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
122.31	121.51	120.72	119.92	119.13	118.34	117.54
63.87	62.45	61.03	59.61	58.18	56.76	55.34
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50.56	-49.44	-48.31	-47.19	-46.06	-44.94	-43.81
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2766.31	2764.09	2761.88	2759.66	2757.45	2755.23	2753.02
54.04	55.16	56.29	57.41	58.54	59.66	60.79
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
35.12	35.86	36.59	37.32	38.05	38.78	39.51

0.450	0.440	0.430	0.420	0.410	0.400	0.390
0.00093	0.00091	0.00089	0.00087	0.00085	0.00083	0.00081
31.18	30.87	30.56	30.27	29.98	29.69	29.41
24.00	24.00	24.00	24.00	23.98	23.75	23.53
2448.00	2448.00	2448.00	2448.00	2446.04	2422.74	2399.89
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001845	0.001834	0.001822	0.001811	0.001799	0.001787	0.001776
0.000931	0.000910	0.000890	0.000869	0.000848	0.000828	0.000807
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
116.75	115.96	115.16	114.37	113.58	112.78	111.99
53.92	52.50	51.07	49.65	48.23	46.81	45.39
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.01	0.12	0.24
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	1.96	25.00	47.17
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-42.68	-41.56	-40.43	-39.31	-38.18	-37.06	-35.93
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750.80	2748.58	2746.37	2744.15	2739.98	2714.46	2689.39
61.92	63.04	64.17	65.29	68.38	92.54	115.84
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
40.25	40.98	41.71	42.44	44.45	60.15	75.29

0.380	0.370	0.360	0.350	0.340	0.330	0.320
0.00079	0.00077	0.00074	0.00072	0.00070	0.00068	0.00066
29.14	28.87	28.60	28.34	28.09	27.83	27.59
23.31	23.09	22.88	22.67	22.47	22.27	22.07
2377.46	2355.44	2333.83	2312.62	2291.78	2271.32	2251.22
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001764	0.001753	0.001741	0.001730	0.001718	0.001707	0.001695
0.000786	0.000766	0.000745	0.000724	0.000703	0.000683	0.000662
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
111.19	110.40	109.61	108.81	108.02	107.23	106.43
43.96	42.54	41.12	39.70	38.28	36.85	35.43
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35	0.45	0.56	0.66	0.77	0.87	0.96
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
68.51	89.06	108.84	127.89	146.25	163.93	180.96
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-34.80	-33.68	-32.55	-31.43	-30.30	-29.18	-28.05
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2664.75	2640.52	2616.69	2593.26	2570.21	2547.53	2525.22
138.31	159.98	180.89	201.07	220.55	239.35	257.51
0.65	0.65	0.65	0.65	0.65	0.65	0.65

1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
89.90	103.99	117.58	130.69	143.36	155.58	167.38

0.310	0.300	0.290	0.280	0.270	0.260	0.250
0.00064	0.00062	0.00060	0.00058	0.00056	0.00054	0.00052
27.35	27.11	26.88	26.65	26.42	26.20	25.98
21.88	21.69	21.50	21.32	21.14	20.96	20.78
2231.47	2212.07	2193.00	2174.26	2155.83	2137.71	2119.90
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001684	0.001672	0.001660	0.001649	0.001637	0.001626	0.001614
0.000641	0.000621	0.000600	0.000579	0.000559	0.000538	0.000517
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
105.64	104.84	104.05	103.26	102.46	101.67	100.88
34.01	32.59	31.17	29.74	28.32	26.90	25.48
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.06	1.16	1.25	1.34	1.43	1.52	1.61
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
197.37	213.19	228.44	243.13	257.30	270.96	284.13
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-26.92	-25.80	-24.67	-23.55	-22.42	-21.30	-20.17
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2503.25	2481.63	2460.35	2439.39	2418.75	2398.42	2378.39
275.05	291.99	308.37	324.19	339.48	354.26	368.56
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
178.78	189.80	200.44	210.72	220.66	230.27	239.56

0.240	0.230	0.220	0.210	0.200	0.190	0.180
0.00050	0.00048	0.00046	0.00043	0.00041	0.00039	0.00037
25.76	25.55	25.35	25.14	24.94	24.74	24.55
20.61	20.44	20.28	20.11	19.95	19.79	19.64
2102.38	2085.15	2068.20	2051.52	2035.10	2018.95	2003.06
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001603	0.001591	0.001580	0.001568	0.001557	0.001545	0.001533
0.000497	0.000476	0.000455	0.000434	0.000414	0.000393	0.000372
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
100.08	99.29	98.50	97.70	96.91	96.11	95.32
24.06	22.63	21.21	19.79	18.37	16.95	15.52
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.69	1.78	1.86	1.94	2.02	2.10	2.18
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
296.82	309.07	320.88	332.27	343.25	353.85	364.07
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-19.04	-17.92	-16.79	-15.67	-14.54	-13.42	-12.29
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2358.65	2339.20	2320.03	2301.14	2282.51	2264.14	2246.03
382.38	395.75	408.69	421.20	433.31	445.04	456.38
0.65	0.65	0.65	0.65	0.65	0.65	0.65



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1456.18	1456.18	1456.18	1456.18	1456.18	1456.18	1456.18
248.55	257.24	265.65	273.78	281.65	289.27	296.65

0.170	0.160	0.150	0.140	0.130	0.120	0.110
0.00035	0.00033	0.00031	0.00029	0.00027	0.00025	0.00023
24.36	24.17	23.98	23.80	23.62	23.44	23.26
19.48	19.33	19.18	19.04	18.89	18.75	18.61
1987.41	1972.00	1956.83	1941.89	1927.18	1912.69	1898.42
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001522	0.001510	0.001499	0.001487	0.001476	0.001464	0.001453
0.000352	0.000331	0.000310	0.000290	0.000269	0.000248	0.000228
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0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
94.53	93.73	92.94	92.15	91.35	90.56	89.77
14.10	12.68	11.26	9.84	8.41	6.99	5.57
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.26	2.33	2.41	2.48	2.55	2.62	2.69
9.50	9.50	9.50	9.50	9.50	9.50	9.50
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-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
373.93	383.44	392.62	401.47	410.01	418.25	426.20
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-11.16	-10.04	-8.91	-7.79	-6.66	-5.53	-4.41
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2228.17	2210.54	2193.16	2176.01	2159.08	2142.37	2125.88
467.37	478.01	488.31	498.29	507.95	517.32	526.39
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1448.31	1436.85	1425.55	1414.40	1403.40	1392.54	1381.82
303.79	310.70	317.40	323.89	330.17	336.26	342.15

0.100	0.090	0.080	0.070	0.060	0.050	0.040
0.00021	0.00019	0.00017	0.00014	0.00012	0.00010	0.00008
23.09	22.92	22.76	22.59	22.43	22.27	22.11
18.47	18.34	18.20	18.07	17.94	17.81	17.69
1884.36	1870.50	1856.85	1843.39	1830.13	1817.06	1804.17
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001441	0.001430	0.001418	0.001406	0.001395	0.001383	0.001372
0.000207	0.000186	0.000166	0.000145	0.000124	0.000103	0.000083
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0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
88.97	88.18	87.38	86.59	85.80	85.00	84.21
4.15	2.73	1.30	-0.12	-1.54	-2.96	-4.38
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.76	2.83	2.90	2.96	3.03	3.09	3.16
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
433.87	441.26	448.40	455.28	461.92	468.32	474.50
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-3.28	-2.16	-1.03	0.09	1.22	2.35	3.47
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
2109.61	2093.53	2077.67	2061.99	2046.52	2031.23	2016.13
535.18	543.71	551.97	559.98	567.74	575.27	582.57
0.65	0.65	0.65	0.65	0.65	0.65	0.65



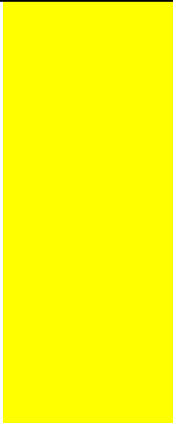
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1371.24	1360.80	1350.48	1340.30	1330.24	1320.30	1310.48
347.87	353.41	358.78	363.98	369.03	373.93	378.67

1300.78	1291.20	1281.73	1278.92	1269.67	1260.52	1251.48
383.28	387.74	392.07	391.09	395.17	399.13	402.97



-0.040	-0.050	-0.060	-0.070	-0.080	-0.090	-0.100
-0.00008	-0.00010	-0.00012	-0.00014	-0.00017	-0.00019	-0.00021
20.92	20.78	20.65	20.51	20.38	20.24	20.11
16.74	16.63	16.52	16.41	16.30	16.19	16.09
1707.30	1695.92	1684.69	1673.61	1662.67	1651.87	1641.21
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001279	0.001268	0.001256	0.001245	0.001233	0.001222	0.001210
-0.000083	-0.000103	-0.000124	-0.000145	-0.000166	-0.000186	-0.000207
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
77.86	77.07	76.27	75.48	74.69	73.89	73.10
-5.69	-7.11	-8.53	-9.95	-11.38	-12.80	-14.22
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.63	3.69	3.74	3.80	3.85	3.90	3.95
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
516.58	521.02	525.30	529.42	533.39	537.22	540.89
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.50	5.63	6.75	7.88	9.01	10.13	11.26
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1911.60	1898.01	1884.56	1871.26	1858.11	1845.09	1832.22
625.69	631.25	636.66	641.91	647.00	651.95	656.75
0.65	0.65	0.65	0.65	0.65	0.65	0.65

1242.54	1233.70	1224.96	1216.32	1207.77	1199.31	1190.94
406.70	410.32	413.83	417.24	420.55	423.77	426.89

-0.110	-0.120	-0.130	-0.140	-0.150	-0.160	-0.170
-0.00023	-0.00025	-0.00027	-0.00029	-0.00031	-0.00033	-0.00035
19.98	19.86	19.73	19.61	19.48	19.36	19.24
15.99	15.89	15.78	15.69	15.59	15.49	15.40
1630.69	1620.31	1610.05	1599.92	1589.93	1580.05	1570.30
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001199	0.001187	0.001175	0.001164	0.001152	0.001141	0.001129
-0.000228	-0.000248	-0.000269	-0.000290	-0.000310	-0.000331	-0.000352
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
72.30	71.51	70.72	69.92	69.13	68.34	67.54
-15.64	-17.06	-18.49	-19.91	-21.33	-22.75	-24.17
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
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0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.01	4.06	4.11	4.16	4.21	4.25	4.30
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
544.44	547.84	551.12	554.27	557.30	560.21	563.01
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
12.38	13.51	14.63	15.76	16.89	18.01	19.14
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1819.49	1806.88	1794.41	1782.07	1769.86	1757.76	1745.79
661.42	665.95	670.36	674.63	678.79	682.83	686.75
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1182.67	1174.47	1166.37	1158.35	1150.41	1142.55	1134.77
429.92	432.87	435.73	438.51	441.21	443.84	446.39

-0.180	-0.190	-0.200	-0.210	-0.220	-0.230	-0.240
-0.00037	-0.00039	-0.00041	-0.00043	-0.00046	-0.00048	-0.00050
19.13	19.01	18.89	18.78	18.67	18.56	18.45
15.30	15.21	15.12	15.02	14.93	14.85	14.76
1560.66	1551.15	1541.75	1532.46	1523.28	1514.21	1505.25
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001118	0.001106	0.001095	0.001083	0.001072	0.001060	0.001048
-0.000372	-0.000393	-0.000414	-0.000434	-0.000455	-0.000476	-0.000497
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
66.75	65.95	65.16	64.37	63.57	62.78	61.99
-25.60	-27.02	-28.44	-29.86	-31.28	-32.71	-34.13
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.35	4.40	4.44	4.49	4.53	4.58	4.62
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
565.70	568.28	570.76	573.13	575.41	577.59	579.69
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.26	21.39	22.52	23.64	24.77	25.89	27.02
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1733.95	1722.21	1710.60	1699.09	1687.70	1676.42	1665.24
690.56	694.27	697.87	701.37	704.78	708.09	711.31
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1127.06	1119.44	1111.89	1104.41	1097.01	1089.67	1082.41
448.87	451.28	453.62	455.89	458.11	460.26	462.35

-0.250	-0.260	-0.270	-0.280	-0.290	-0.300	-0.310
-0.00052	-0.00054	-0.00056	-0.00058	-0.00060	-0.00062	-0.00064
18.34	18.23	18.13	18.02	17.92	17.81	17.71
14.67	14.58	14.50	14.42	14.33	14.25	14.17
1496.40	1487.65	1479.00	1470.45	1462.00	1453.65	1445.39
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.001037	0.001025	0.001014	0.001002	0.000991	0.000979	0.000968
-0.000517	-0.000538	-0.000559	-0.000579	-0.000600	-0.000621	-0.000641
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
61.19	60.40	59.61	58.81	58.02	57.22	56.43
-35.55	-36.97	-38.39	-39.82	-41.24	-42.66	-44.08
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.66	4.71	4.75	4.79	4.83	4.87	4.91
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
581.69	583.61	585.44	587.19	588.86	590.46	591.98
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
28.14	29.27	30.40	31.52	32.65	33.77	34.90
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1654.17	1643.21	1632.34	1621.58	1610.91	1600.34	1589.87
714.43	717.48	720.43	723.31	726.11	728.83	731.48
0.65	0.65	0.65	0.65	0.65	0.65	0.65



1075.21	1068.08	1061.02	1054.02	1047.09	1040.22	1033.41
464.38	466.36	468.28	470.15	471.97	473.74	475.46

-0.320	-0.330	-0.340	-0.350	-0.360	-0.370	-0.380
-0.00066	-0.00068	-0.00070	-0.00072	-0.00074	-0.00077	-0.00079
17.61	17.51	17.42	17.32	17.22	17.13	17.04
14.09	14.01	13.93	13.86	13.78	13.70	13.63
1437.22	1429.15	1421.16	1413.27	1405.46	1397.74	1390.10
0.002069	0.002069	0.002069	0.002069	0.002069	0.002069	0.002069
0.000956	0.000945	0.000933	0.000921	0.000910	0.000898	0.000887
-0.000662	-0.000683	-0.000703	-0.000724	-0.000745	-0.000766	-0.000786
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
132.13	132.13	132.13	132.13	132.13	132.13	132.13
55.64	54.84	54.05	53.26	52.46	51.67	50.88
-45.50	-46.93	-48.35	-49.77	-51.19	-52.61	-54.04
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.95	4.99	5.03	5.07	5.11	5.15	5.19
9.50	9.50	9.50	9.50	9.50	9.50	9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
-9.50	-9.50	-9.50	-9.50	-9.50	-9.50	-9.50
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
593.43	594.81	596.12	597.37	598.55	599.67	600.73
104.60	104.60	104.60	104.60	104.60	104.60	104.60
0.00	0.00	0.00	0.00	0.00	0.00	0.00
36.02	37.15	38.28	39.40	40.53	41.65	42.78
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
1579.48	1569.19	1558.99	1548.88	1538.86	1528.92	1519.07
734.05	736.56	739.00	741.37	743.68	745.92	748.11
0.65	0.65	0.65	0.65	0.65	0.65	0.65

