Tabel bevattende de betondrukspanning en de ijzertrekspanning van kolommen belast op normaalkracht en dubbele buiging.

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Tabel, bevattende de betondrukspanning en de ijzertrekspanning van kolommen belast op normaalkracht en dubbele buiging.

1. Inleiding.

Van de zijde der afdeling Publieke Werken der Gemeente Amsterdam werd ons verzocht de berekening uit te voeren van de formules VI A, VII, VIII, IX A, X, XI, XII A, XIII, XIV en XV voorkomende op de pagina's 8 en 9 van het rapport: "De Berekening van Kolommen belast op Normaalkracht en Dubbele Buiging en de Opstelling van een Tabel daarvoor" door G. Bouma.

Zij η de afstand van de lijn NL (nullijn) tot het middelpunt en de hoek tussen de totaalkracht e_M en diens component in de y-richting e_y, dan wordt volgens bovenvermeld rapport:

$$e_M = \frac{3(\cos\beta+\sin\beta+2\eta)(\cos\beta+\sin\beta-2\eta)^3+1520\mu(1-2\delta)^2\cos\beta\sin\beta}{12(\cos\beta+\sin\beta-2\eta)^3-8640\mu\eta\cos\beta\sin\beta} \quad \text{(VIA)}$$

$$c_b = \frac{24\cos\beta\sin\beta(\cos\beta+\sin\beta-2\eta)}{(\cos\beta+\sin\beta-2\eta)^3-360\mu\eta\cos\beta\sin\beta} \quad \text{(VII)}$$

$$c_y = 360.\cos\beta\sin\beta\,\frac{(1-2\delta)(\cos\beta+\sin\beta)+2\eta}{(\cos\beta+\sin\beta-2\eta)^3-360\mu\eta\cos\beta\sin\beta} \quad \text{(VIII)}$$

zolang $\eta \geqslant \frac{1}{2}(\cos\beta-\sin\beta)$, geval A.

$$e_M = \frac{4\eta^3-(2\cos^2\beta+1)\eta+\cos\beta+\frac{190}{3}\mu(1-2\delta)^2\cos\beta}{\sin^2\beta+3(\cos\beta-2\eta)^2-360\mu\eta\cos\beta} \quad \text{(IX A)}$$

$$c_b = 12\cos\beta\,\frac{\cos\beta+\sin\beta-2\eta}{\sin^2\beta+3(\cos\beta-2\eta)^2-180\mu\eta\cos\beta} \quad \text{(X)}$$

$$c_y = 180\cos\beta\,\frac{(1-2\delta)(\cos\beta+\sin\beta)+2\eta}{\sin^2\beta+3(\cos^2\beta-2\eta)^2-180\mu\eta\cos\beta} \quad \text{(XI)}$$

voor $-\frac{1}{2}(\cos\beta-\sin\beta) \lesssim \eta \lesssim \frac{1}{2}(\cos\beta-\sin\beta)$, geval B.

$$e_M = \frac{-3(\cos\beta+\sin\beta-2\eta)(\cos\beta+\sin\beta+2\eta)^3+\{1520\mu(1-2\delta)^2+16\}\cos\beta\sin\beta}{-576(15\mu+1)\eta\cos\beta\sin\beta+3(\cos\beta+\sin\beta+2\eta)^3} \quad \text{(XII A)}$$

$$c_b = \frac{\cos\beta + \sin\beta - 2\eta}{-24(15\mu+1)\eta\cos\beta\sin\beta + (\cos\beta+\sin\beta+2\eta)^3}\ 24\cos\beta\sin\beta \quad \text{(XIII)}$$

$$c_y = 360\cos\beta\sin\beta\ \frac{(1-2\delta)(\cos\beta+\sin\beta)+2\eta}{-24(15\mu+1)\eta\cos\beta\sin\beta + (\cos\beta+\sin\beta+2\eta)^3} \quad \text{(XIV)}$$

voor $-\frac{1}{2}(\cos\beta+\sin\beta) \leqslant \eta \leqslant \frac{1}{2}(\cos\beta-\sin\beta)$, geval C

en geval D, voor $\eta \leqslant -\frac{1}{2}(\cos\beta+\sin\beta)$

$$c_b = \frac{1}{1+15\mu} + 18\,\frac{e_x+e_y}{3+95\mu(1-2\delta)^2} \quad \text{(XV)}$$

De β wordt begrensd door 0 en $\frac{\pi}{4}$, en er geldt $\operatorname{tg}\beta = \frac{e_y}{e_x}$.

Bepaald werden voor $\mu = 0.01\ (0.002)0.02$
en voor $\mu = 0.02\ (0.005)0.04$

de c_b en c_y voor de volgende waarden van e_x en e_y:

$e_x = 0.(0.1)1.0$ en $= 1.0(0.2)3.0$

$e_y = 0.(0.1)1.0$ en $= 1.0(0.2)3.0$

waarbij $e_y \leqslant e_x$.

2. Methode van berekening.

Geval B loonde de moeite, het probleem om te keren . Allereerst werden bij ronde waarden van β en η de e_x en e_y bepaald en deze in grafieken uitgezet. Daarna konden de verlangde e_x en e_y waarden geïnterpoleerd worden uit de grafieken met de daarbij behorende c_b en c_y. Het bleek, dat de parameter η in meer cijfers bepaald diende te worden dan de verlangde precisie in de eindantwoorden (3 geldige cijfers). Bovenstaande berekening werd dan ook uitgevoerd voor de waarden van μ gelijk aan $0.01(0.01)0.04$.

Voor de interpolatie in μ richting werd gebruik gemaakt van de formules:

Stel eerst $z = 0.01/\mu$

dan wordt $a(\mu)$ gedefiniëerd door

$$C_y(\mu) = C_y(0.01).z(1-a\log z) .$$

De $a(\mu)$ blijkt een, t.o.v. één, kleine, gemakkelijk interpoleerbare functie van μ te zijn.

Verder zij $b(\mu)$ gedefiniëerd door

$$C_b(\mu) = C_b(0.01)\ z^{\frac{1}{2}}\ b(\mu),$$

waarin $b(\mu)$ ongeveer gelijk aan één is en gemakkelijk met behulp van 4^e-graads Lagrange geïnterpoleerd kan worden.

Verder blijkt gemakkelijk in de e_x- en e_y-richting geinterpoleerd te kunnen worden.

In de gevallen A en C was het beter de η's direct te berekenen met behulp van derde graads vergelijkingen, waarna de berekening van de c_b en c_y duidelijk was.

In de onder 3 volgende tabel, wordt steeds de e_y per tabel constant gehouden en de μ en e_x gevariëerd. De mogelijke fout in de opgegeven waarden is kleiner dan $\frac{1}{2}$ procent.

Van de voor elk stel (e_x, μ) opgegeven waarden, stelt de bovenste de c_b voor, de onderste de c_y. Negatieve spanningen zijn weggelaten.

3. Tabel.

$e_y = 0$	e_x	$\mu = 0.010$	$\mu = 0.012$	$\mu = 0.014$	$\mu = 0.016$	$\mu = 0.018$
	0	0.87	0.85	0.83	0.81	0.79
	0.1	1.38	1.34	1.31	1.27	1.24
	0.2	1.90	1.85	1.80	1.75	1.70
	0.3	2.62 10.9	2.52 10.0	2.43 9.1	2.35 8.4	2.28 7.8
	0.4	3.51 31.9	3.35 28.3	3.21 25.5	3.08 23.3	2.97 21.4
	0.5	4.45 57.9	4.21 50.6	4.01 45.1	3.83 40.7	3.67 37.2
	0.6	5.39 86.2	5.07 74.7	4.80 66.1	4.57 59.3	4.37 53.9
	0.7	6.34 115.7	5.93 99.6	5.59 87.7	5.31 78.5	5.07 71.2
	0.8	7.28 145.7	6.78 125.0	6.39 109.8	6.05 98.1	5.77 88.8
	0.9	8.21 176.0	7.64 150.7	7.18 132.1	6.79 117.8	6.46 106.4
	1.0	9.13 206.6	8.49 176.5	7.96 154.4	7.52 137.6	7.15 124.2
	1.2	10.97 268.1	10.18 228.5	9.53 199.6	8.98 177.5	8.53 160.0
	1.4	12.80 329.9	11.86 280.7	11.09 244.9	10.44 217.5	9.91 195.9
	1.6	14.63 391.9	13.53 333.1	12.65 290.3	11.90 257.6	11.29 231.9
	1.8	16.46 453.9	15.20 385.6	14.20 335.8	13.35 297.8	12.66 267.9
	2.0	18.28 516.0	16.87 438.1	15.75 381.3	14.80 338.0	14.03 303.9
	2.2	20.10 578.2	18.54 490.6	17.30 426.8	16.25 378.3	15.39 340.0
	2.4	21.91 640.5	20.21 543.1	18.84 472.3	17.70 418.5	16.75 376.1
	2.6	23.73 702.7	21.88 595.6	20.38 517.8	19.15 458.8	18.11 412.2
	2.8	25.55 765.0	23.54 648.2	21.92 563.4	20.60 499.0	19.47 448.3
	3.0	27.36 827.2	25.19 700.7	23.46 609.0	22.04 539.3	20.83 484.4

$e_y = 0$	e_x	$\mu = 0.020$	$\mu = 0.025$	$\mu = 0.030$	$\mu = 0.035$	$\mu = 0.040$
	0	0.77	0.73	0.69	0.66	0.63
	0.1	1.21	1.14	1.08	1.03	0.98
	0.2	1.66	1.57	1.48	1.40	1.33
	0.3	2.22 7.3	2.09 6.2	1.96 5.4	1.84 4.8	1.74 4.3
	0.4	2.87 19.8	2.66 16.8	2.47 14.6	2.31 12.9	2.18 11.5
	0.5	3.53 34.3	3.25 28.7	3.00 24.7	2.79 21.7	2.62 19.4
	0.6	4.19 49.5	3.84 41.2	3.53 35.3	3.28 30.9	3.07 27.6
	0.7	4.85 65.2	4.42 54.0	4.06 46.1	3.77 40.4	3.52 35.9
	0.8	5.51 81.1	5.00 67.0	4.58 57.1	4.25 49.9	3.96 44.3
	0.9	6.17 97.1	5.58 80.0	5.10 68.1	4.73 59.5	4.41 52.8
	1.0	6.82 113.2	6.15 93.1	5.63 79.2	5.21 69.1	4.85 61.3
	1.2	8.13 145.7	7.32 119.5	6.68 101.5	6.17 88.4	5.74 78.3
	1.4	9.43 178.2	8.48 146.0	7.73 123.8	7.13 107.7	6.62 95.4
	1.6	10.73 210.8	9.63 172.5	8.77 146.2	8.09 127.1	7.51 112.5
	1.8	12.02 243.5	10.78 199.1	9.81 168.6	9.05 146.5	8.39 129.7
	2.0	13.32 276.2	11.93 225.7	10.85 191.1	10.01 165.9	9.27 146.9
	2.2	14.61 309.0	13.08 252.3	11.90 213.6	10.96 185.4	10.15 164.0
	2.4	15.91 341.8	14.23 278.9	12.94 236.1	11.91 204.9	11.03 181.2
	2.6	17.20 374.5	15.38 305.5	13.98 258.6	12.86 224.4	11.92 198.4
	2.8	18.49 407.3	16.53 332.2	15.02 281.1	13.81 243.9	12.80 215.6
	3.0	19.78 440.0	17.68 358.9	16.06 303.6	14.76 263.4	13.68 232.8

$\frac{}{= 0.1}$ e_x	$\mu = 0.010$	$\mu = 0.012$	$\mu = 0.014$	$\mu = 0.016$	$\mu = 0.018$
0.1	1.89	1.84	1.79	1.74	1.70
0.2	2.49 6.1	2.42 5.7	2.35 5.4	2.28 5.1	2.22 4.9
0.3	3.32 20.1	3.19 18.5	3.08 17.2	2.97 16.1	2.87 15.1
0.4	4.34 42.5	4.12 38.0	3.93 34.6	3.78 31.8	3.63 29.4
0.5	5.41 69.6	5.09 61.3	4.81 54.9	4.59 49.8	4.39 45.7
0.6	6.45 98.9	6.03 86.2	5.68 76.5	5.39 69.0	5.14 63.0
0.7	7.47 129.0	6.95 111.7	6.54 98.6	6.18 88.6	5.88 80.6
0.8	8.47 159.6	7.86 137.6	7.38 121.0	6.95 108.4	6.60 98.4
0.9	9.44 190.5	8.75 163.7	8.20 143.7	7.71 128.4	7.31 116.2
1.0	10.42 221.5	9.63 189.9	9.01 166.4	8.46 148.5	8.02 134.2
1.2	12.32 283.6	11.38 242.3	10.61 211.9	9.96 188.7	9.43 170.3
1.4	14.20 345.9	13.10 294.9	12.20 257.5	11.44 229.0	10.83 206.4
1.6	16.06 408.2	14.80 347.5	13.78 303.2	12.92 269.3	12.23 242.6
1.8	17.92 470.5	16.50 400.2	15.34 348.8	14.40 309.7	13.61 278.8
2.0	19.76 532.9	18.19 452.8	16.90 394.5	15.86 350.1	14.99 315.0
2.2	21.60 595.3	19.87 505.4	18.46 440.1	17.32 390.5	16.37 351.1
2.4	23.43 657.7	21.55 558.1	20.03 485.8	18.77 430.8	17.73 387.3
2.6	25.26 720.1	23.22 610.7	21.58 531.4	20.23 471.1	19.10 423.5
2.8	27.09 782.5	24.89 663.4	23.13 577.0	21.68 511.4	20.46 459.7
3.0	28.91 844.8	26.55 716.1	24.67 622.6	23.13 551.8	21.83 495.9

e_y=0.1 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.1	1.66	1.56	1.47	1.40	1.33
0.2	2.16 4.6	2.02 4.1	1.91 3.7	1.80 3.4	1.71 3.1
0.3	2.78 14.3	2.59 12.5	2.42 11.2	2.28 10.1	2.14 9.2
0.4	3.49 27.4	3.21 23.4	2.97 20.6	2.78 18.4	2.61 16.6
0.5	4.20 42.3	3.83 35.6	3.53 31.0	3.29 27.5	3.08 24.7
0.6	4.90 58.0	4.44 48.4	4.09 41.9	3.79 36.9	3.54 33.0
0.7	5.59 74.0	5.05 61.5	4.64 52.9	4.30 46.5	4.00 41.5
0.8	6.28 90.1	5.66 74.7	5.18 64.0	4.79 56.1	4.46 50.0
0.9	6.96 106.3	6.26 87.9	5.71 75.2	5.28 65.8	4.91 58.5
1.0	7.63 122.6	6.85 101.2	6.24 86.4	5.77 75.5	5.36 67.1
1.2	8.97 155.3	8.03 127.8	7.30 108.8	6.75 94.9	6.26 84.2
1.4	10.29 188.1	9.21 154.4	8.36 131.2	7.71 114.3	7.16 101.4
1.6	11.61 220.9	10.38 181.0	9.42 153.7	8.67 133.8	8.06 118.6
1.8	12.92 253.7	11.54 207.7	10.48 176.2	9.63 153.3	8.94 135.8
2.0	14.22 286.5	12.70 234.4	11.52 198.7	10.60 172.8	9.82 153.0
2.2	15.52 319.3	13.85 261.1	12.57 221.2	11.56 192.3	10.70 170.2
2.4	16.82 352.2	15.01 287.7	13.61 243.7	12.52 211.8	11.58 187.4
2.6	18.12 385.0	16.16 314.4	14.66 266.3	13.47 231.3	12.47 204.6
2.8	19.42 417.8	17.31 341.1	15.70 288.8	14.42 250.8	13.35 221.9
3.0	20.71 450.6	18.46 367.8	16.75 311.4	15.37 270.3	14.23 239.1

e_y=0.2 e_x	μ =0.010	μ =0.012	μ =0.014	μ =0.016	μ =0.018
0.2	3.27 17.3	3.15 16.2	3.04 15.2	2.94 14.4	2.85 13.6
0.3	4.20 33.6	4.01 30.9	3.84 28.8	3.69 26.9	3.55 25.1
0.4	5.26 56.5	4.97 50.7	4.72 46.2	4.51 42.5	4.32 39.4
0.5	6.38 83.7	5.98 74.0	5.64 66.5	5.36 60.5	5.11 55.7
0.6	7.48 113.0	6.97 98.8	6.55 88.1	6.20 79.7	5.89 72.9
0.7	8.55 143.4	7.93 124.5	7.44 110.4	7.02 99.4	6.65 90.6
0.8	9.60 174.2	8.87 150.6	8.31 133.0	7.83 119.4	7.41 108.5
0.9	10.63 205.3	9.80 176.8	9.15 155.8	8.62 139.5	8.15 126.5
1.0	11.63 236.5	10.71 203.1	9.98 178.7	9.39 159.7	8.87 144.6
1.2	13.61 299.2	12.52 256.0	11.63 224.4	10.91 200.1	10.31 180.9
1.4	15.54 361.9	14.28 308.9	13.25 270.2	12.42 240.6	11.73 217.1
1.6	17.44 424.5	16.02 361.8	14.85 316.1	13.92 281.1	13.14 253.4
1.8	19.33 487.1	17.75 414.6	16.44 361.9	15.41 321.6	14.54 289.7
2.0	21.20 549.7	19.46 467.4	18.02 407.7	16.89 362.1	15.94 326.0
2.2	23.06 612.3	21.16 520.2	19.60 453.5	18.37 402.6	17.32 362.3
2.4	24.91 674.8	22.85 573.0	21.18 499.3	19.83 443.0	18.70 398.6
2.6	26.75 737.3	24.53 625.8	22.75 545.0	21.29 483.4	20.08 434.9
2.8	28.59 799.8	26.21 678.6	24.31 590.7	22.75 523.8	21.45 471.1
3.0	30.43 862.3	27.88 731.4	25.87 636.3	24.21 564.2	22.82 507.3

e_y=0.2 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.35	μ=0.040
0.2	2.76 12.9	2.57 11.5	2.41 10.4	2.26 9.4	2.14 8.7
0.3	3.43 23.5	3.17 20.5	2.95 18.4	2.76 16.7	2.60 15.2
0.4	4.15 36.7	3.80 31.6	3.51 27.9	3.27 25.0	3.07 22.6
0.5	4.89 51.6	4.43 43.8	4.08 38.2	3.79 34.0	3.54 30.6
0.6	5.62 67.3	5.06 56.6	4.65 49.0	4.31 43.4	4.01 38.9
0.7	6.34 83.4	5.69 69.7	5.21 60.1	4.82 53.0	4.48 47.4
0.8	7.04 99.6	6.31 82.9	5.77 71.3	5.32 62.6	4.95 35.9
0.9	7.74 115.9	6.93 96.2	6.32 82.5	5.82 72.3	5.41 64.5
1.0	8.43 132.3	7.54 109.5	6.86 93.7	6.32 82.1	5.87 73.1
1.2	9.79 165.2	8.74 136.2	7.93 116.2	7.30 101.6	6.77 90.3
1.4	11.13 198.1	9.93 162.9	9.01 138.7	8.28 121.1	7.67 107.5
1.6	12.46 231.0	11.12 189.6	10.07 161.3	9.25 140.6	8.57 124.8
1.8	13.78 263.9	12.29 216.4	11.13 183.9	10.22 160.1	9.46 142.0
2.0	15.10 296.8	13.45 243.2	12.18 206.4	11.19 179.6	10.35 159.2
2.2	16.41 329.7	14.62 269.9	13.23 228.9	12.15 199.1	11.24 176.4
2.4	17.72 362.6	15.78 296.6	14.28 251.4	13.12 218.7	12.13 193.7
2.6	19.03 395.5	16.93 323.3	15.33 274.0	14.07 238.2	13.02 210.9
2.8	20.33 428.3	18.08 350.0	16.38 296.6	15.03 257.8	13.90 228.2
3.0	21.63 461.2	19.24 376.8	17.43 319.2	15.98 277.3	14.78 245.4

e_y=0.3 e_x	μ =0.010	μ =0.012	μ =0.014	μ =0.016	μ =0.018
0.3	5.18 51.3	4.91 46.6	4.68 42.8	4.48 39.7	4.30 37.0
0.4	6.25 73.8	5.88 66.0	5.56 60.2	5.30 55.3	5.07 51.1
0.5	7.37 100.2	6.89 88.7	6.49 79.9	6.16 72.8	5.87 67.0
0.6	8.50 129.0	7.90 113.0	7.41 101.0	7.02 91.5	6.65 83.9
0.7	9.61 159.0	8.89 138.4	8.32 123.2	7.85 111.1	7.42 101.5
0.8	10.69 189.7	9.86 164.3	9.21 145.9	8.67 131.0	8.19 119.3
0.9	11.76 220.8	10.81 190.6	10.08 168.7	9.48 151.1	8.95 137.3
1.0	12.80 252.0	11.75 217.1	10.93 191.4	10.27 171.4	9.70 155.4
1.2	14.84 314.9	13.60 270.0	12.62 237.1	11.83 211.9	11.16 191.7
1.4	16.82 377.8	15.41 323.1	14.27 283.1	13.36 252.4	12.60 228.0
1.6	18.76 440.7	17.19 376.1	15.90 329.1	14.89 293.0	14.03 264.4
1.8	20.68 503.5	18.95 429.1	17.52 375.1	16.40 333.6	15.45 300.7
2.0	22.59 566.3	20.68 482.1	19.12 421.0	17.89 374.2	16.86 337.1
2.2	24.48 629.1	22.40 535.0	20.72 466.8	19.39 414.7	18.26 373.5
2.4	26.35 691.8	24.11 587.9	22.31 512.7	20.87 455.2	19.66 409.9
2.6	28.21 754.5	25.81 640.8	23.89 558.5	22.34 495.7	21.05 446.1
2.8	30.07 817.1	27.50 693.7	25.46 604.2	23.82 536.2	22.43 482.4
3.0	31.92 879.7	29.19 746.6	27.04 650.0	25.27 576.7	23.80 518.7

e_y=0.3 e_x	μ =0.020	μ =0.025	μ =0.030	μ =0.035	μ =0.040
0.3	4.14 34.7	3.79 30.2	3.51 26.8	3.27 24.1	3.07 21.9
0.4	4.86 47.7	4.42 41.0	4.08 36.1	3.79 32.3	3.54 29.2
0.5	5.60 62.2	5.06 52.9	4.65 46.2	4.31 41.1	4.02 37.1
0.6	6.34 77.5	5.70 65.6	5.22 56.9	4.83 50.5	4.49 45.3
0.7	7.07 93.5	6.34 78.4	5.79 67.8	5.35 59.9	4.97 53.7
0.8	7.79 109.6	6.97 91.5	6.35 78.9	5.86 69.5	5.44 62.1
0.9	8.50 125.9	7.60 104.8	6.91 90.1	6.36 79.2	5.90 70.7
1.0	9.21 142.4	8.22 118.1	7.46 101.2	6.86 88.9	6.36 79.3
1.2	10.59 175.4	9.44 144.8	8.56 123.8	7.86 108.4	7.28 96.5
1.4	11.95 208.3	10.65 171.6	9.65 146.5	8.85 128.0	8.19 113.7
1.6	13.30 241.2	11.84 198.4	10.72 169.1	9.83 147.5	9.09 131.0
1.8	14.64 274.2	13.02 225.2	11.78 191.7	10.80 167.0	9.99 148.2
2.0	15.97 307.2	14.20 252.0	12.84 214.2	11.77 186.6	10.89 165.5
2.2	17.29 340.2	15.37 278.7	13.90 236.7	12.74 206.1	11.78 182.7
2.4	18.61 373.1	16.53 305.5	14.95 259.3	13.70 225.7	12.67 200.0
2.6	19.93 406.0	17.69 332.2	16.00 281.9	14.66 245.2	13.56 217.2
2.8	21.24 438.9	18.85 359.0	17.05 304.5	15.63 264.8	14.45 234.5
3.0	22.54 471.8	20.01 385.8	18.10 327.1	16.58 284.3	15.33 251.7

e_y=0.4	e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
	0.4	7.30 94.7	6.84 84.4	6.45 76.3	6.12 69.9	5.84 64.5
	0.5	8.40 119.6	7.83 105.7	7.36 95.0	6.96 86.6	6.63 79.5
	0.6	9.52 147.1	8.83 129.1	8.27 115.4	7.82 104.7	7.41 96.0
	0.7	10.64 176.2	9.83 153.8	9.18 137.0	8.67 123.8	8.19 113.2
	0.8	11.75 206.4	10.82 179.3	10.08 159.4	9.50 143.4	8.97 130.8
	0.9	12.84 237.2	11.80 205.3	10.97 182.0	10.32 163.3	9.74 148.6
	1.0	13.91 268.2	12.76 231.5	11.85 204.6	11.13 183.4	10.51 166.6
	1.2	16.00 330.9	14.65 284.4	13.57 250.2	12.72 223.8	11.99 202.8
	1.4	18.04 393.8	16.50 337.5	15.26 296.1	14.29 264.4	13.45 239.1
	1.6	20.03 456.9	18.31 390.6	16.93 342.2	15.84 305.1	14.90 275.5
	1.8	21.99 519.9	20.09 443.7	18.58 388.3	17.36 345.7	16.34 311.9
	2.0	23.93 582.9	21.85 496.8	20.21 434.3	18.87 386.3	17.76 348.3
	2.2	25.85 645.8	23.60 549.9	21.82 480.2	20.38 426.9	19.18 384.7
	2.4	27.75 708.7	25.33 602.9	23.42 526.1	21.88 467.4	20.59 421.1
	2.6	29.63 771.5	27.05 655.9	25.01 572.0	23.36 508.0	21.99 457.4
	2.8	31.50 834.2	28.76 708.9	26.60 617.9	24.84 548.5	23.38 493.7
	3.0	33.36 896.9	30.46 761.8	28.18 663.7	26.31 589.1	24.76 530.1

e_y=0.4 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.4	5.59 60.1	5.07 51.4	4.65 45.1	4.31 40.2	4.02 36.3
0.5	6.32 73.9	5.70 62.9	5.23 54.8	4.83 48.8	4.50 44.0
0.6	7.06 88.8	6.35 75.1	5.80 65.2	5.35 57.9	4.98 52.0
0.7	7.80 104.4	6.99 87.7	6.37 75.9	5.87 67.2	5.45 60.2
0.8	8.53 120.3	7.63 100.6	6.94 86.9	6.38 76.7	5.92 68.6
0.9	9.25 136.4	8.26 113.8	7.50 98.0	6.89 86.3	6.39 77.1
1.0	9.97 152.7	8.89 127.0	8.06 109.1	7.40 95.9	6.86 85.7
1.2	11.37 185.6	10.13 153.7	9.17 131.7	8.41 115.4	7.78 102.9
1.4	12.75 218.6	11.35 180.5	10.27 154.3	9.41 135.0	8.70 120.1
1.6	14.12 251.6	12.55 207.3	11.35 176.9	10.39 154.5	9.61 137.3
1.8	15.47 284.6	13.74 234.1	12.42 199.5	11.37 174.0	10.51 154.5
2.0	16.81 317.6	14.92 260.9	13.48 222.1	12.34 193.6	11.41 171.8
2.2	18.15 350.5	16.10 287.6	14.54 244.6	13.31 213.1	12.31 189.0
2.4	19.48 383.5	17.28 314.4	15.60 267.2	14.28 232.7	13.20 206.3
2.6	20.80 416.5	18.45 341.2	16.66 289.8	15.25 252.2	14.09 223.5
2.8	22.12 449.4	19.61 368.0	17.72 312.4	16.22 271.8	14.98 240.8
3.0	23.43 482.4	20.77 394.8	18.77 335.0	17.18 291.3	15.87 258.1

e_y=0.5 e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
0.5	9.47 142.4	8.80 125.3	8.25 112.4	7.79 102.1	7.39 93.8
0.6	10.56 168.0	9.80 147.4	9.16 131.6	8.62 119.3	8.18 109.3
0.7	11.68 195.7	10.79 170.8	10.07 152.2	9.46 137.6	8.97 125.8
0.8	12.79 224.7	11.77 195.5	10.97 173.7	10.31 156.6	9.75 142.9
0.9	13.89 254.7	12.76 220.9	11.87 195.8	11.15 176.1	10.52 160.4
1.0	14.99 285.3	13.74 246.8	12.76 218.3	11.98 196.0	11.29 178.2
1.2	17.12 347.5	15.68 299.3	14.53 263.7	13.60 236.1	12.80 214.3
1.4	19.21 410.2	17.55 352.2	16.25 309.4	15.19 276.7	14.29 250.6
1.6	21.25 473.3	19.39 405.3	17.94 355.5	16.75 317.3	15.76 286.9
1.8	23.25 536.4	21.21 458.5	19.61 401.6	18.30 357.9	17.21 323.2
2.0	25.22 599.5	23.00 511.7	21.26 447.6	19.84 398.5	18.65 359.5
2.2	27.17 662.5	24.77 564.8	22.89 493.6	21.36 439.1	20.08 395.9
2.4	29.09 725.5	26.52 617.9	24.51 539.6	22.87 479.7	21.50 432.3
2.6	30.99 788.4	28.26 671.0	26.11 585.6	24.37 520.3	22.91 468.7
2.8	32.89 851.2	29.99 724.0	27.71 631.5	25.86 560.9	24.31 505.1
3.0	34.78 914.0	31.71 777.0	29.30 677.4	27.35 601.5	25.70 541.5

e_y=0.5 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.5	7.06 86.9	6.35 73.6	5.80 64.2	5.35 57.0	4.98 51.3
0.6	7.80 101.1	7.00 85.3	6.38 74.1	5.88 65.7	5.46 59.1
0.7	8.53 116.1	7.64 97.6	6.95 84.6	6.40 74.8	5.94 67.1
0.8	9.26 131.6	8.28 110.3	7.52 95.3	6.92 84.2	6.41 75.4
0.9	9.99 147.5	8.92 123.2	8.08 106.1	7.44 93.7	6.88 83.8
1.0	10.71 163.6	9.55 136.3	8.64 117.1	7.95 103.2	7.35 92.2
1.2	12.14 196.3	10.80 162.9	9.77 139.6	8.96 122.6	8.28 109.3
1.4	13.54 229.1	12.03 189.6	10.88 162.2	9.96 142.1	9.20 126.5
1.6	14.92 262.1	13.24 216.3	11.97 184.8	10.95 161.6	10.12 143.7
1.8	16.29 295.1	14.44 243.0	13.05 207.4	11.93 181.1	11.03 160.9
2.0	17.65 328.1	15.64 269.8	14.12 230.0	12.91 200.6	11.93 178.2
2.2	19.00 361.1	16.83 296.6	15.19 252.5	13.89 220.1	12.83 195.4
2.4	20.34 394.0	18.01 323.4	16.25 275.1	14.87 239.7	13.73 212.7
2.6	21.67 427.0	19.19 350.2	17.31 297.7	15.84 259.3	14.63 229.9
2.8	22.99 460.0	20.36 377.0	18.37 320.3	16.81 278.8	15.52 247.2
3.0	24.31 493.0	21.52 403.8	19.43 342.9	17.78 298.4	16.41 264.5

e_y=0.6 e_x	μ =0.010	μ =0.012	μ =0.014	μ =0.016	μ =0.018
0.6	11.63 191.7	10.75 167.6	10.05 149.5	9.46 133.4	8.96 123.9
0.7	12.72 217.7	11.74 189.8	10.95 169.0	10.30 152.7	9.74 139.5
0.8	13.83 245.3	12.73 213.3	11.86 189.5	11.14 170.9	10.53 155.9
0.9	14.94 274.1	13.72 237.7	12.76 210.8	11.98 189.9	11.31 172.9
1.0	16.04 303.8	14.71 262.9	13.66 232.8	12.82 209.3	12.08 190.4
1.2	18.21 365.0	16.66 314.7	15.45 277.7	14.45 249.0	13.61 226.0
1.4	20.34 427.1	18.57 367.3	17.21 323.2	16.06 289.2	15.12 262.0
1.6	22.42 490.0	20.44 420.3	18.92 369.0	17.65 329.7	16.61 298.3
1.8	24.46 553.0	22.28 473.4	20.61 415.0	19.23 370.2	18.08 334.7
2.0	26.46 616.1	24.10 526.6	22.28 461.0	20.78 410.8	19.53 371.1
2.2	28.44 679.2	25.90 579.7	23.93 507.1	22.32 451.4	20.97 407.4
2.4	30.40 742.2	27.68 632.8	25.56 553.1	23.84 492.1	22.40 443.8
2.6	32.34 805.2	29.44 685.9	27.18 599.1	25.35 532.7	23.82 480.2
2.8	34.26 868.1	31.19 739.0	28.79 645.1	26.85 573.3	25.23 516.6
3.0	36.16 931.0	32.93 792.1	30.40 691.0	28.35 614.0	26.63 553.0

e_y=0.6 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.6	8.52 114.4	7.64 96.4	6.95 83.6	6.40 74.1	5.94 66.5
0.7	9.26 128.7	8.28 108.2	7.53 93.7	6.92 82.9	6.42 74.4
0.8	10.00 143.7	8.93 120.4	8.10 104.0	7.44 92.0	6.90 82.4
0.9	10.73 159.2	9.57 133.0	8.66 114.6	7.96 101.3	7.37 90.6
1.0	11.46 175.0	10.20 146.0	9.22 125.5	8.48 110.7	7.84 99.0
1.2	12.89 207.2	11.46 172.3	10.36 147.8	9.50 129.9	8.78 115.9
1.4	14.31 239.8	12.70 198.8	11.48 170.3	10.50 149.3	9.71 133.0
1.6	15.71 272.7	13.92 225.5	12.58 192.8	11.51 168.8	10.63 150.2
1.8	17.10 305.7	15.14 252.1	13.66 215.3	12.49 188.3	11.54 167.4
2.0	18.47 338.7	16.35 278.9	14.74 237.9	13.48 207.7	12.45 184.6
2.2	19.82 371.6	17.54 305.7	15.82 260.5	14.46 227.2	13.35 201.8
2.4	21.17 404.6	18.73 332.5	16.89 283.1	15.44 246.8	14.25 219.1
2.6	22.51 437.6	19.92 359.3	17.96 305.7	16.42 266.4	15.15 236.3
2.8	23.84 470.6	21.10 386.1	19.02 328.3	17.40 285.9	16.05 253.6
3.0	25.17 503.6	22.27 412.9	20.08 350.9	18.37 305.5	16.94 270.9

e_y=0.7	e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
	0.7	13.79 241.9	12.71 210.6	11.84 187.3	11.12 169.0	10.52 154.4
	0.8	14.88 268.0	13.69 232.9	12.74 206.8	11.96 186.4	11.30 170.1
	0.9	15.98 295.5	14.68 256.3	13.65 227.2	12.80 204.6	12.08 186.5
	1.0	17.08 324.0	15.67 280.6	14.55 248.4	13.64 223.5	12.86 203.4
	1.2	19.27 383.5	17.64 330.9	16.35 292.4	15.31 262.4	14.41 238.3
	1.4	21.44 444.9	19.57 382.9	18.14 337.3	16.94 302.1	15.93 273.9
	1.6	23.55 507.2	21.47 435.6	19.88 382.8	18.54 342.3	17.43 310.0
	1.8	25.62 569.9	23.33 488.5	21.59 428.6	20.13 382.7	18.92 346.3
	2.0	27.66 632.9	25.17 541.6	23.28 474.6	21.70 423.2	20.39 382.6
	2.2	29.67 695.9	27.00 594.7	24.95 520.6	23.25 463.8	21.85 418.9
	2.4	31.66 758.9	28.81 647.8	26.60 566.6	24.79 504.5	23.29 455.3
	2.6	33.63 822.0	30.59 700.9	28.24 612.6	26.32 545.1	24.72 491.7
	2.8	35.57 885.0	32.36 754.1	29.87 658.6	27.84 583.7	26.14 528.1
	3.0	37.50 947.9	34.12 807.2	31.48 704.6	29.34 626.4	27.55 564.5

e_y=0.7 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.7	9.99 142.2	8.92 119.4	8.11 103.3	7.44 91.3	6.90 81.9
0.8	10.73 156.7	9.57 131.3	8.68 113.3	7.96 100.1	7.38 89.7
0.9	11.46 171.7	10.21 143.5	9.24 123.6	8.48 109.2	7.85 97.8
1.0	12.19 187.0	10.84 156.1	9.80 134.2	9.01 118.5	8.33 106.0
1.2	13.64 218.6	12.11 182.0	10.95 156.3	10.03 137.4	9.27 122.7
1.4	15.07 250.9	13.36 208.2	12.08 178.6	11.04 156.6	10.20 139.7
1.6	16.49 283.6	14.60 234.8	13.18 201.0	12.05 176.0	11.13 156.8
1.8	17.89 316.5	15.83 261.4	14.27 223.5	13.05 195.4	12.05 173.9
2.0	19.27 349.4	17.05 288.1	15.36 246.0	14.04 214.9	12.96 191.1
2.2	20.64 382.4	18.25 314.8	16.45 268.5	15.03 234.4	13.87 208.3
2.4	22.00 415.3	19.45 341.6	17.53 291.1	16.01 254.0	14.77 225.6
2.6	23.35 448.3	20.64 368.4	18.60 313.7	17.00 273.5	15.68 242.8
2.8	24.69 481.3	21.83 395.2	19.67 336.3	17.98 293.1	16.58 260.1
3.0	26.03 514.3	23.01 422.0	20.73 358.9	18.95 312.7	17.47 277.3

e_y=0.8 e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
0.8	15.95 292.6	14.66 254.0	13.63 225.2	12.79 203.0	12.07 185.0
0.9	17.03 318.7	15.64 276.3	14.53 244.8	13.62 220.4	12.85 200.8
1.0	18.12 346.0	16.62 299.7	15.43 265.2	14.45 238.5	13.63 217.1
1.2	20.32 403.5	18.60 348.5	17.24 307.8	16.11 276.3	15.18 251.1
1.4	22.50 463.5	20.56 399.3	19.03 352.0	17.76 315.5	16.72 286.2
1.6	24.64 525.0	22.48 451.3	20.80 397.0	19.40 355.3	18.24 321.9
1.8	26.75 587.2	24.37 503.8	22.54 442.5	21.01 395.5	19.74 358.1
2.0	28.83 649.9	26.25 556.7	24.26 488.3	22.60 435.9	21.23 394.3
2.2	30.88 712.8	28.10 609.7	25.95 534.2	24.17 476.4	22.70 430.6
2.4	32.89 775.8	29.92 662.8	27.62 580.2	25.72 517.0	24.15 466.9
2.6	34.88 838.9	31.72 715.9	29.27 626.2	27.26 557.6	25.59 503.2
2.8	36.85 901.9	33.51 769.1	30.91 672.2	28.79 598.2	27.02 539.6
3.0	38.80 964.9	35.29 822.3	32.54 718.2	30.31 638.9	28.45 576.0

e_y=0.8 e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.8	11.45 170.3	10.21 142.6	9.25 123.1	8.49 108.6	7.86 97.3
0.9	12.18 184.7	10.85 154.4	9.83 133.1	9.01 117.4	8.34 105.1
1.0	12.92 199.6	11.49 166.6	10.39 143.4	9.53 126.5	8.81 113.2
1.2	14.37 230.5	12.76 192.0	11.53 165.0	10.56 145.1	9.76 129.7
1.4	15.81 262.3	14.02 217.9	12.66 187.0	11.58 164.1	10.70 146.5
1.6	17.24 294.7	15.27 244.3	13.77 209.3	12.59 183.4	11.63 163.5
1.8	18.66 327.5	16.51 270.8	14.87 231.7	13.60 202.8	12.55 180.6
2.0	20.06 360.3	17.74 297.4	15.97 254.1	14.60 222.2	13.47 197.7
2.2	21.44 393.2	18.95 324.1	17.06 276.6	15.59 241.7	14.38 214.9
2.4	22.81 426.1	20.16 350.8	18.15 299.1	16.58 261.2	15.29 232.1
2.6	24.17 459.0	21.36 377.6	19.23 321.7	17.57 280.8	16.20 249.3
2.8	25.52 492.0	22.55 404.4	20.31 344.3	18.55 300.3	17.10 266.6
3.0	26.87 525.0	23.74 431.2	21.38 366.9	19.52 319.8	18.00 283.8

e_y=0.9 e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
0.9	18.10 343.5	16.61 297.6	15.42 263.5	14.45 237.1	13.62 215.9
1.0	19.18 369.6	17.58 319.9	16.32 283.1	15.28 254.5	14.40 231.6
1.2	21.36 425.0	19.55 367.1	18.13 324.2	16.95 291.1	15.96 264.6
1.4	23.55 483.4	21.52 416.6	19.93 367.4	18.60 329.5	17.51 302.3
1.6	25.72 543.7	23.46 476.6	21.71 411.7	20.24 368.7	19.04 337.7
1.8	27.85 605.2	25.39 519.5	23.47 456.7	21.87 408.6	20.55 373.2
2.0	29.96 667.6	27.29 572.2	25.21 502.3	23.48 448.8	22.05 406.2
2.2	32.04 730.0	29.16 625.0	26.93 548.0	25.07 489.2	23.54 442.4
2.4	34.08 792.9	31.01 678.0	28.62 593.9	26.64 529.7	25.01 478.5
2.6	36.09 855.9	32.82 731.0	30.29 639.9	28.19 570.2	26.46 514.9
2.8	38.09 918.9	34.63 784.2	31.94 685.9	29.73 610.8	27.90 551.2
3.0	40.07 981.9	36.43 837.4	33.58 731.9	31.27 651.4	29.34 587.6

e_y=0.9 / e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
0.9	12.91 198.5	11.49 165.9	10.40 143.0	9.53 126.0	8.82 112.8
1.0	13.64 212.8	12.13 177.7	10.97 153.1	10.05 134.8	9.29 120.6
1.2	15.11 242.9	13.40 202.4	12.11 174.1	11.08 153.0	10.24 136.8
1.4	16.56 274.2	14.67 227.9	13.24 195.7	12.11 171.8	11.18 153.4
1.6	18.00 306.2	15.93 254.0	14.36 217.7	13.13 190.9	12.12 170.3
1.8	19.42 338.6	17.18 280.3	15.47 239.9	14.14 210.2	13.05 187.3
2.0	20.83 371.4	18.42 306.9	16.58 262.2	15.15 229.6	13.97 204.4
2.2	22.23 404.2	19.64 333.6	17.68 284.8	16.15 249.0	14.89 221.5
2.4	23.61 437.0	20.85 360.2	18.77 307.3	17.14 268.5	15.80 238.7
2.6	24.98 469.9	22.06 386.9	19.86 329.8	18.13 288.0	16.71 255.9
2.8	26.34 502.8	23.26 413.7	20.94 352.4	19.11 307.5	17.62 273.1
3.0	27.70 535.8	24.46 440.4	22.02 375.0	20.09 327.0	18.52 290.3

e_y=1.0 / e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
1.0	20.24 394.6	18.55 341.3	17.21 301.9	16.10 271.3	15.17 246.8
1.2	22.41 447.9	20.51 386.8	19.00 341.6	17.77 306.7	16.73 278.8
1.4	24.59 504.5	22.47 434.9	20.80 383.6	19.43 344.1	18.28 312.3
1.6	26.77 563.5	24.42 485.0	22.59 427.9	21.08 382.7	19.82 347.1
1.8	28.92 624.1	26.36 536.2	24.37 471.5	22.71 422.1	21.34 382.5
2.0	31.06 685.5	28.29 588.2	26.14 516.7	24.33 462.0	22.86 418.2
2.2	33.17 747.6	30.19 640.6	27.88 562.2	25.94 502.1	24.36 454.2
2.4	35.24 810.3	32.06 693.4	29.59 608.0	27.53 542.4	25.84 490.3
2.6	37.27 873.1	33.90 746.3	31.27 653.9	29.10 582.8	27.31 526.5
2.8	39.30 936.0	35.73 799.4	32.94 699.8	30.66 623.3	28.77 562.8
3.0	41.31 998.9	37.54 852.6	34.59 745.7	32.20 663.9	30.21 599.2

e_y=1.0 / e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
1.0	14.37 226.7	12.77 189.2	11.55 162.9	10.57 143.4	9.77 128.3
1.2	15.83 255.9	14.05 213.2	12.69 183.6	11.61 161.2	10.72 144.1
1.4	17.29 286.4	15.32 238.2	13.83 204.6	12.64 179.7	11.67 160.5
1.6	18.74 318.0	16.58 263.9	14.96 226.3	13.67 198.6	12.61 177.2
1.8	20.17 350.1	17.84 290.1	16.08 248.4	14.69 217.7	13.54 194.1
2.0	21.60 382.5	19.09 316.5	17.19 270.6	15.70 237.0	14.47 211.1
2.2	23.01 415.2	20.32 343.0	18.29 293.1	16.70 256.4	15.39 228.2
2.4	24.40 448.0	21.54 369.6	19.38 315.5	17.69 275.8	16.31 245.3
2.6	25.78 480.8	22.75 396.3	20.47 338.0	18.68 295.2	17.22 262.5
2.8	27.15 513.7	23.96 423.0	21.56 360.5	19.67 314.7	18.13 279.6
3.0	28.51 546.6	25.16 449.7	22.65 383.1	20.66 334.2	19.04 296.8

e_y=1.2 / e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
1.2	24.53 497.1	22.43 429.0	20.77 378.7	19.41 339.8	18.27 308.7
1.4	26.68 550.2	24.38 474.4	22.57 418.4	21.08 375.2	19.82 340.6
1.6	28.85 606.2	26.34 522.0	24.37 459.9	22.74 412.1	21.37 373.9
1.8	31.03 664.3	28.30 571.3	26.16 502.8	24.39 450.2	22.91 408.2
2.0	33.20 723.9	30.25 621.9	27.94 546.8	26.03 489.2	24.45 443.2
2.2	35.35 784.7	32.18 673.4	29.70 591.5	27.66 528.8	25.98 478.6
2.4	37.47 846.3	34.09 725.4	31.45 636.7	29.27 568.7	27.49 514.3
2.6	39.56 908.4	35.97 777.8	33.18 682.2	30.87 608.8	28.98 550.3
2.8	41.64 970.8	37.84 830.5	34.90 727.9	32.45 649.0	30.45 586.5
3.0	43.69 1033.5	39.69 883.4	36.59 773.6	34.02 689.3	31.92 622.7

e_y=1.2 / e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
1.2	17.29 283.3	15.33 236.9	13.84 202.8	12.66 178.3	11.68 159.3
1.4	18.75 312.4	16.61 259.8	14.99 223.3	13.70 196.1	12.63 175.1
1.6	20.20 342.7	17.88 284.7	16.13 244.5	14.73 214.5	13.59 191.4
1.8	21.65 373.8	19.15 310.2	17.26 266.1	15.76 233.2	14.53 208.0
2.0	23.09 405.6	20.41 336.1	18.38 288.0	16.78 252.2	15.46 224.8
2.2	24.52 437.9	21.66 362.3	19.49 310.0	17.79 271.4	16.39 241.7
2.4	25.94 470.4	22.89 388.7	20.59 332.2	18.79 290.7	17.32 258.7
2.6	27.34 503.1	24.12 415.3	21.69 354.5	19.79 310.0	18.24 275.8
2.8	28.73 535.8	25.34 441.8	22.79 376.9	20.79 329.4	19.16 292.9
3.0	30.12 568.5	26.56 468.4	23.89 399.4	21.79 348.9	20.07 310.1

e_y=1.4 / e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
1.4	28.80 600.0	26.30 517.0	24.33 455.8	22.72 409.6	21.36 371.9
1.6	30.95 652.9	28.25 562.2	26.12 495.3	24.38 443.7	22.91 403.7
1.8	33.12 708.4	30.21 609.4	27.91 536.5	26.04 480.4	24.46 435.7
2.0	35.30 765.8	32.17 658.1	29.70 579.0	27.69 518.2	26.00 469.7
2.2	37.46 824.6	34.12 708.1	31.49 622.5	29.33 556.6	27.53 504.3
2.4	39.62 884.6	36.06 759.0	33.27 666.8	30.96 595.8	29.06 539.4
2.6	41.76 945.6	37.98 810.6	35.03 711.6	32.59 635.4	30.58 574.9
2.8	43.88 1007.0	39.88 862.6	36.77 756.7	34.21 675.3	32.09 610.7
3.0	45.97 1069.2	41.76 915.0	38.48 802.1	35.81 715.4	33.59 646.8

e_y=1.4 / e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
1.4	20.20 340.1	17.88 282.7	16.13 242.8	14.74 213.2	13.60 190.4
1.6	21.66 369.1	19.16 306.6	17.27 263.2	15.78 231.0	14.55 206.2
1.8	23.12 399.2	20.44 331.3	18.41 284.2	16.81 249.3	15.50 222.4
2.0	24.57 430.1	21.71 356.6	19.54 305.6	17.84 267.9	16.44 238.9
2.2	26.01 461.6	22.97 382.3	20.67 327.3	18.86 286.8	17.38 255.6
2.4	27.44 493.5	24.22 408.4	21.79 349.3	19.87 305.9	18.31 272.5
2.6	28.86 525.7	25.46 434.7	22.90 371.5	20.88 325.1	19.24 289.4
2.8	30.28 558.2	26.70 461.0	24.01 393.8	21.89 344.4	20.16 306.4
3.0	31.69 590.9	27.93 487.4	25.11 416.1	22.89 363.7	21.08 323.5

e_y=1.6

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
1.6	33.08 702.9	30.18 605.0	27.89 532.9	26.02 477.4	24.46 433.1
1.8	35.22 755.6	32.12 650.1	29.67 572.4	27.68 512.5	26.00 464.8
2.0	37.38 810.7	34.07 697.0	31.46 613.3	29.34 548.9	27.55 497.6
2.2	39.55 867.6	36.03 745.3	33.25 655.4	30.99 586.3	29.10 531.3
2.4	41.72 925.8	37.98 794.8	35.04 698.5	32.64 624.5	30.64 565.7
2.6	43.88 985.2	39.92 845.2	36.82 742.4	34.28 663.3	32.17 600.6
2.8	46.03 1045.6	41.85 896.3	38.58 786.8	35.91 702.6	33.69 635.9
3.0	48.16 1106.5	43.77 947.9	40.33 831.6	37.53 742.3	35.20 671.4

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
1.6	23.11 396.9	20.44 329.6	18.42 282.8	16.82 248.2	15.51 221.5
1.8	24.57 425.3	21.72 353.4	19.56 303.1	17.86 266.0	16.46 237.3
2.0	26.02 455.7	22.99 378.0	20.70 324.0	18.89 284.2	17.41 253.4
2.2	27.48 486.4	24.26 403.1	21.84 345.3	19.91 302.7	18.35 269.9
2.4	28.92 517.7	25.52 428.7	22.97 366.9	20.93 321.5	19.29 286.5
2.6	30.36 549.4	26.78 454.6	24.09 388.8	21.95 340.5	20.23 303.2
2.8	31.79 581.5	28.03 480.7	25.21 410.9	22.97 359.6	21.16 320.1
3.0	33.21 613.7	29.27 506.9	26.32 433.1	23.98 378.8	22.08 337.1

e_y=1.8

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
1.8	37.35 806.0	34.04 693.1	31.44 610.1	29.32 546.2	27.54 495.3
2.0	39.50 858.7	35.98 738.2	33.23 649.5	30.98 581.3	29.08 526.9
2.2	41.65 913.4	37.93 784.8	35.02 690.2	32.63 617.5	30.64 559.7
2.4	43.81 969.7	39.89 832.7	36.80 732.0	34.29 654.7	32.19 593.2
2.6	45.98 1027.4	41.84 881.8	38.58 774.8	35.94 692.6	33.73 627.3
2.8	48.14 1086.3	43.79 931.7	40.36 818.3	37.59 731.1	35.26 661.9
3.0	50.30 1146.0	45.73 982.3	42.14 862.3	39.23 770.1	36.79 696.9

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
1.8	26.02 453.7	22.99 376.5	20.71 322.9	18.91 283.3	17.42 252.7
2.0	27.48 482.7	24.27 400.3	21.85 343.1	19.94 301.0	18.37 268.4
2.2	28.93 512.4	25.54 424.7	22.99 363.9	20.97 319.1	19.32 284.4
2.4	30.38 542.9	26.81 449.7	24.13 385.1	22.00 337.5	20.26 300.7
2.6	31.83 573.9	28.08 475.2	25.26 406.7	23.03 356.2	21.20 317.3
2.8	33.27 605.4	29.34 500.9	26.38 428.5	24.05 375.1	22.14 334.0
3.0	34.71 637.2	30.59 526.8	27.49 450.4	25.06 394.2	23.07 350.9

e_y=2.0

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
2.0	41.61 909.1	37.91 781.3	35.00 687.5	32.62 615.1	30.63 557.6
2.2	43.76 961.6	39.85 826.3	36.78 726.7	34.27 650.2	32.18 589.2
2.4	45.91 1016.1	41.80 872.7	38.57 767.2	35.93 686.3	33.73 621.7
2.6	48.07 1072.1	43.75 920.3	40.35 808.8	37.59 723.2	35.27 655.0
2.8	50.23 1129.3	45.70 969.0	42.14 851.3	39.24 760.8	36.81 689.0
3.0	52.40 1187.6	47.65 1018.5	43.92 894.4	40.89 799.0	38.35 723.4

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
2.0	28.93 510.6	25.54 423.4	22.99 362.9	20.98 318.3	19.32 283.8
2.2	30.38 539.5	26.82 447.2	24.14 383.2	22.01 336.0	20.27 299.6
2.4	31.84 569.1	28.10 471.6	25.28 403.9	23.05 354.0	21.22 315.6
2.6	33.29 599.4	29.37 496.4	26.41 425.0	24.08 372.4	22.17 331.8
2.8	34.74 630.3	30.64 521.6	27.54 446.6	25.11 391.0	23.11 348.2
3.0	36.19 661.5	31.90 547.2	28.66 468.0	26.13 409.9	24.05 365.0

e_y=2.2 / e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
2.2	45.87 1012.2	41.77 869.5	38.55 764.7	35.92 684.0	33.72 619.9
2.4	48.02 1064.7	43.71 914.4	40.33 803.9	37.57 719.1	35.26 651.4
2.6	50.17 1118.9	45.66 960.6	42.11 844.3	39.23 755.0	36.81 683.8
2.8	52.33 1174.5	47.61 1008.0	43.90 885.7	40.88 791.7	38.36 717.0
3.0	54.49 1231.4	49.56 1056.3	45.69 927.9	42.54 829.1	39.90 750.8

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
2.2	31.83 567.5	28.10 470.3	25.28 403.0	23.05 353.3	21.23 315.0
2.4	33.29 596.3	29.37 494.1	26.42 423.3	24.09 371.0	22.18 330.7
2.6	34.74 625.9	30.65 518.4	27.56 443.9	25.12 389.0	23.13 346.7
2.8	36.20 656.1	31.92 543.1	28.70 464.9	26.16 407.3	24.08 362.9
3.0	37.65 686.8	33.19 568.2	29.83 486.3	27.20 425.9	25.03 379.2

e_y=2.4

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
2.4	50.14 1115.4	45.64 957.8	42.10 842.1	39.22 753.0	36.80 682.2
2.6	52.27 1167.8	47.58 1002.6	43.88 881.2	40.87 788.0	38.35 713.5
2.8	54.42 1221.8	49.52 1048.7	45.66 921.5	42.52 823.8	39.90 746.1
3.0	56.58 1277.2	51.47 1095.8	47.45 962.7	44.18 860.3	41.44 779.1

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
2.4	34.74 624.4	30.65 517.3	27.57 443.1	25.13 388.3	23.14 346.1
2.6	36.20 653.2	31.92 541.0	28.71 463.3	26.17 406.0	24.09 361.9
2.8	37.65 682.8	33.20 565.3	29.85 483.9	27.20 424.0	25.04 377.8
3.0	39.10 712.7	34.47 589.9	30.99 504.9	28.24 442.3	26.00 394.0

e_y=2.6

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
2.6	54.40 1218.6	49.50 1046.0	45.65 919.4	42.52 822.0	39.89 744.5
2.8	56.54 1271.0	51.44 1090.8	47.43 958.6	44.17 857.0	41.43 776.1
3.0	58.68 1324.8	53.38 1136.7	49.21 998.7	45.82 892.6	42.98 808.3

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
2.6	37.65 681.4	33.20 564.2	29.85 483.1	27.21 423.4	25.05 377.3
2.8	39.10 710.2	34.48 588.0	30.99 503.4	28.24 441.0	26.00 393.0
3.0	40.55 739.6	35.75 612.1	32.13 524.0	29.28 459.0	26.95 409.0

e_y=2.8

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
2.8	58.66 1321.8	53.36 1134.3	49.20 996.7	45.81 890.9	42.97 806.8
3.0	60.80 1374.2	55.30 1179.1	50.98 1035.8	47.46 925.8	44.52 838.3

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
2.8	40.55 738.3	35.75 611.2	32.14 523.2	29.29 458.4	26.96 408.5
3.0	42.00 767.0	37.03 634.9	33.28 543.5	30.32 476.1	27.91 424.2

e_y=3.0

e_x	μ=0.010	μ=0.012	μ=0.014	μ=0.016	μ=0.018
3.0	62.92 1425.0	57.22 1222.6	52.75 1074.0	49.11 959.9	46.06 869.2

e_x	μ=0.020	μ=0.025	μ=0.030	μ=0.035	μ=0.040
3.0	43.46 795.2	38.30 658.2	34.42 563.3	31.36 493.5	28.87 439.7