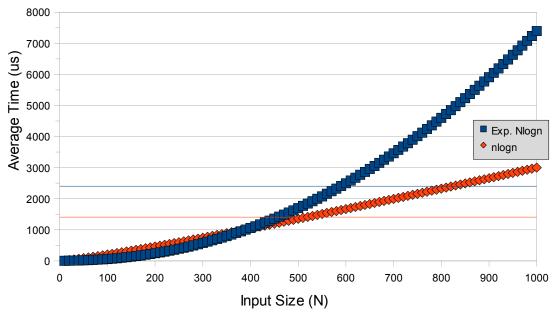
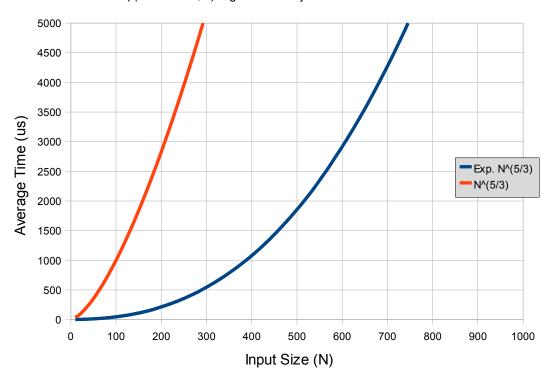
Sheet1

Quicksort Average Case Analysis

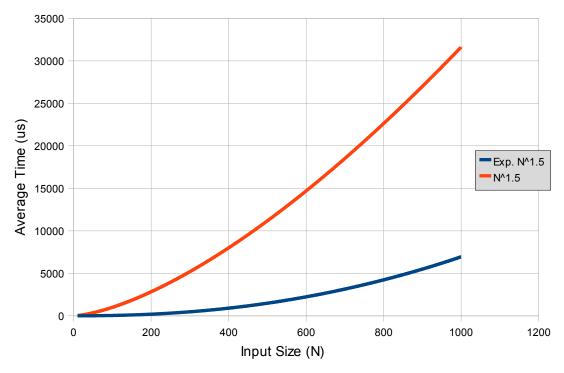


Shell Sort H-seq (1.732n^1/3, 1) Avg. Case Analysis

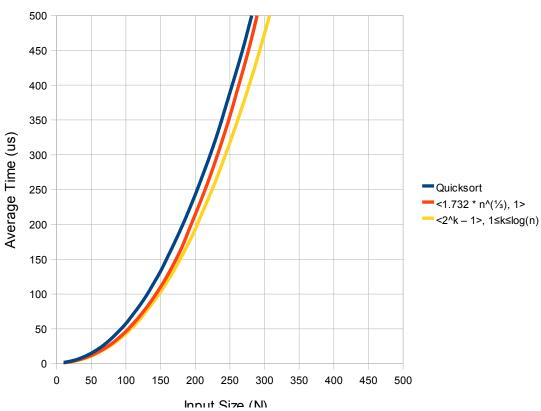


Sheet1

## Shell Sort H-seq (log(n), 2<sup>k</sup> - 1) Avg. Case Analysis



## Quick Sort and Shell Sort Average Case Analysis



Page 2

וווףענ טובע (וזי)

Sheet2

Quick Sort D	uick Sort Data Set, s = 500 Shell Sort Data Set, s = 500				
Input Size N	<u>Avg. Time (μs)</u>	H-seq = 1.	732n^(1/3)	H-seq = $Io$	gn (2^k – 1)
10	1.65	Input Size N	Avg. Time (µs)	Input Size N	Avg. Time (µs)
20	3.48	10	1.25	10	1.42
30	6.25	20	2.77	20	2.68
40	10.16	30	5.04	30	4.61
50	15.01	40	8.08	40	7.27
60	21.09	50	11.94	50	10.77
70	28.24	60	16.72	60	15.64
80	36.98	70	22.45	70	21.03
90	46.82	80	29.12	80	27.4
100	57.6	90	37.26	90	34.77
110	70.37	100	46.31	100	43.25
120	83.73	110	56.95	110	52.9
130	98.46	120	68.31	120	63.52
140	115.28	130	81	130	76.23
150	132.75	140	94.91	140	89.13
160	152.8	150	110.18	150	103.21
170	173.51	160	126.73	160	118.51
180	195.09	170	145.37	170	135.25
190	218.17	180	165.56	180	153.46
200	242.63	190	189.65	190	172.49
210	268.53	200	214.17	200	192.85
220	295.53	210	238.95	210	216.66
230	324.04	220	265.37	220	239.67
240	355.91	230	293.51	230	263.93
250	389.15	240	323.65	240	290.11
260	421.97	250	355.45	250	317.44
270	456.55	260	390.26	260	345.91
280	494.23	270	425.08	270	375.8
290	533.1	280	462.07	280	406.91
300	574.24	290	503.31	290	439.62
310	615.74	300	545.88	300	474.22
320	658.32	310	588.97	310	509.8
330	703.39	320	635.14	320	547
340	748.72	330	683.13	330	585.77
350	795.22	340	732.84	340	625.59
360	847.84	350	786.04	350	669.03
370	897.72	360	839.51	360	711.73
380	949.13	370	895.67	370	756.7
390	1002.93	380	954.26	380	802.41
400	1057.16	390	1014.55	390	853.76
410	1113.39	400	1077.76	400	902.49
420	1171.98	410	1143.18	410	953.36
430	1232.96	420	1212.1	420	1007.13
440	1293.83	430	1283.71	430	1060.97
450	1355.9	440	1357.11	440	1116.27
460	1420.06	450	1435.34	450	1172.7
470	1485.95	460	1513.33	460	1232.21

			Sheet2		
480	1553.5	470	1595.83	470	1292.21
490	1624.01	480	1679.33	480	1353.73
500	1695.36	490	1765.11	490	1419.57
510	1766.74	500	1854.7	500	1484.62
520	1843.94	510	1946.09	510	1551.3
530	1919.08	520	2040.39	520	1619.13
540	1996.18	530	2137.41	530	1692.62
550	2074.76	540	2239.86	540	1765.07
560	2157.07	550	2346.72	550	1840.94
570	2240.56	560	2455.33	560	1915.68
580	2323.54	570	2564.88	570	1992.29
590	2408.4	580	2681.7	570 580	2071.23
600	2496.03	590	2797.56	590 590	2151.06
	2585.08				
610 620		600	2914.17	600	2235.07
620	2675.26	610	3035.74	610	2318.41
630	2767.48	620	3160.62	620	2402.68
640	2860.41	630	3287.8	630	2488.81
650	2956.03	640	3418.26	640	2577.39
660	3053.07	650	3551.24	650	2668.91
670	3152.66	660	3689.5	660	2761.23
680	3253.08	670	3830.95	670	2854.68
690	3357.47	680	3975.75	680	2951.6
700	3461.12	690	4122.11	690	3049.72
710	3568.25	700	4271.19	700	3148.94
720	3676.75	710	4422.92	710	3249.54
730	3785.55	720	4580.77	720	3352.94
740	3898.97	730	4740.32	730	3456.93
750	4011.46	740	4902.81	740	3562.46
760	4126.21	750	5071.04	750	3669.51
770	4242.59	760	5240.79	760	3778.97
780	4359.86	770	5416.12	770	3889.78
790	4479.34	780	5590.6	780	4002.18
800	4599.9	790	5770.7	790	4116.46
810	4724.08	800	5955.53	800	4233.08
820	4850.8	810	6143.34	810	4352.02
830	4976.95	820	6336.54	820	4472.05
840	5106.17	830	6530.42	830	4593.94
850	5236.32	840	6729.95	840	4717.05
860	5367.48	850	6936.77	850	4842.02
870	5501.15	860	7143.19	860	4968.64
880	5636.7	870	7353.15	870	5097.73
890	5772.66	880	7569.65	880	5228.29
900	5909.64	890	7788.36	890	5361.16
910	6049.59	900	8009.4	900	5495.18
920	6191.73	910	8236.62	910	5631.43
930	6336.54	920	8467.39	920	5770.37
940	6482.18	930	8700.93	930	5910.73
950	6629.44	940	8939.76	940	6052.63
960	6778.28	950	9179.54	950	6196.02

Sheet2					
970	6927.75	960	9423.49	960	6342.63
980	7079.65	970	9672.48	970	6490.08
990	7236.53	980	9923.29	980	6640.13
1000	7393.28	990	10179.81	990	6792.02
		1000	10440.05	1000	6945.58

Sheet3

Actual Quick Sort Time, n * log(n)		Actual Shell Sort Time, n^(5/3), n^(3/2)			
Input Size N	Avg. Time	$H-seq = 1.732n^{(1/3)}$ $H-seq = logn (2^{$		gn (2^k – 1)	
10	10	Input Size N	Avg. Time (µs)	Input Size N	Avg. Time (µs)
20	26.02	10	46.42	10	31.62
30	44.31	20	147.36	20	89.44
40	64.08	30	289.65	30	164.32
50	84.95	40	467.84	40	252.98
60	106.69	50	678.6	50	353.55
70	129.16	60	919.57	60	464.76
80	152.25	70	1188.95	70	585.66
90	175.88	80	1485.31	80	715.54
100	200	90	1807.47	90	853.81
110	224.55	100	2154.43	100	1000
120	249.5	110	2525.35	110	1153.69
130	274.81	120	2919.46	120	1314.53
140	300.46	130	3336.1	130	1482.23
150	326.41	140	3774.68	140	1656.5
160	352.66	150	4234.66	150	1837.12
170	379.18	160	4715.56	160	2023.86
180	405.95	170	5216.93	170	2216.53
190	432.96	180	5738.36	180	2414.95
200	460.21	190	6279.47	190	2618.97
210	487.67	200	6839.9	200	2828.43
220	515.33	210	7419.34	210	3043.19
230	543.2	220	8017.48	220	3263.13
240	571.25	230	8634.02	230	3488.12
250	599.49	240	9268.7	240	3718.06
260	627.89	250	9921.26	250	3952.85
270	656.47	260	10591.45	260	4192.37
280	685.2	270	11279.06	270	4436.55
290	714.1	280	11983.86	280	4685.3
300	743.14	290	12705.64	290	4938.52
310	772.32	300	13444.21	300	5196.15
320	801.65	310	14199.38	310	5458.11
330	831.11	320	14970.97	320	5724.33
340	860.7	330	15758.8	330	5994.75
350	890.42	340	16562.72	340	6269.29
360	920.27	350	17382.55	350	6547.9
370	950.23	360	18218.15	360	6830.52
380	980.32	370	19069.36	370	7117.09
390	1010.52	380	19936.06	380	7407.56
400	1040.82	390	20818.1	390	7701.88
410	1071.24	400	21715.34	400	8000
420	1101.76	410	22627.67	410	8301.87
430	1132.39	420	23554.95	420	8607.44
440	1163.12	430	24497.07	430	8916.67
450	1193.95	440	25453.91	440	9229.52
460	1224.87	450	26425.36	450	9545.94
470	1255.89	460	27411.31	460	9865.9

Sheet3

490         1318.2         480         29426.28         480         10516.27           500         1349.49         490         30455.11         490         10846.61           510         1380.86         500         31498.03         500         11180.3           520         1412.32         510         32554.95         510         11517.42           530         1443.87         520         33625.77         520         11857.82           540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12548.47           560         1538.99         550         36920.81         550         12888.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           690         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14686.	480	1287	470	28411.65	470	10189.36
500         1349.49         490         30455.11         490         10846.61           510         1380.86         500         31498.03         500         11180.34           520         1412.32         510         32554.95         510         11517.42           530         1443.87         520         33625.77         520         11857.82           540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12548.47           560         1538.99         550         36920.81         550         12888.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.5           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15058						
510         1380.86         500         31498.03         500         11180.34           520         1412.32         510         32554.95         510         11517.42           530         1443.87         520         33625.77         520         11857.82           540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12548.47           560         1538.99         550         36920.81         550         12888.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           690         1664.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         1560.88           630         1763.58         620         45080.23         620         15437						
520         1412.32         510         32554.95         510         11517.42           530         1443.87         520         33625.77         520         11857.82           540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12548.47           560         1538.99         550         36920.81         550         12898.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14666.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         1581		1380.86		31498.03		11180.34
530         1443.87         520         33625.77         520         11857.82           540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12584.47           560         1538.99         550         36920.81         550         12898.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         4752.98         640         16190		1412.32		32554.95		
540         1475.49         530         34710.41         530         12201.52           550         1507.2         540         35808.79         540         12584.64           560         1538.99         550         36920.81         550         12898.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.26           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15085.88           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571		1443.87		33625.77		11857.82
550         1507.2         540         35808.79         540         12548.47           560         1538.99         550         36920.81         550         12288.6           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1690.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15612.81           650         1828.39         640         47529.87         640         16190.86           660         180.9         650         48774.06         650         16871.81           670         1893.47         660         50031.08         660         16955.7						
560         1538.99         550         36920.81         550         12898.64           570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         1368.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14898.96           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         1619.08           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         5130.86         670         17342.5						
570         1570.85         560         38046.38         560         13252.02           580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         5031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732						12898.64
580         1602.79         570         39185.44         570         13608.56           590         1634.8         580         40337.9         580         13968.25           600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         1812		1570.85	560	38046.38	560	13252.02
600         1666.89         590         41503.69         590         14331.05           610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         1569.94           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         189	580	1602.79	570	39185.44	570	13608.56
610         1699.05         600         42682.72         600         14696.94           620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         640         16190.86           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         25918.3         720         57839.01         720         19	590	1634.8	580	40337.9	580	13968.25
620         1731.28         610         43874.93         610         15065.89           630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2156.3         740         60541.46         730         197	600	1666.89	590	41503.69	590	14331.05
630         1763.58         620         45080.23         620         15437.88           640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         201	610	1699.05	600	42682.72	600	14696.94
640         1795.96         630         46298.57         630         15812.87           650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1998.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         205	620	1731.28	610	43874.93	610	15065.89
650         1828.39         640         47529.87         640         16190.86           660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951	630	1763.58	620	45080.23	620	15437.88
660         1860.9         650         48774.06         650         16571.81           670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366	640	1795.96	630	46298.57	630	15812.87
670         1893.47         660         50031.08         660         16955.71           680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         2178	650	1828.39	640	47529.87	640	16190.86
680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         2220	660	1860.9	650	48774.06	650	16571.81
680         1926.11         670         51300.86         670         17342.52           690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         2220	670	1893.47	660	50031.08	660	16955.71
690         1958.81         680         52583.34         680         17732.23           700         1991.57         690         53878.46         690         18124.82           710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         2348	680	1926.11		51300.86		17342.52
710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         23627.42           820         2389.33         810         70384.18         810         23053           840         2426.39         830         73304.42         830         23912.0		1958.81	680	52583.34	680	17732.23
710         2024.39         700         55186.15         700         18520.26           720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         23627.42           820         2389.33         810         70384.18         810         23053           840         2426.39         830         73304.42         830         23912.0	700	1991.57	690	53878.46	690	18124.82
720         2057.28         710         56506.35         710         18918.54           730         2090.23         720         57839.01         720         19319.63           740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           840         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.0	710		700	55186.15	700	18520.26
740         2123.23         730         59184.06         730         19723.51           750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55	720		710	56506.35	710	18918.54
750         2156.3         740         60541.46         740         20130.18           760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15	730	2090.23	720	57839.01	720	19319.63
760         2189.42         750         61911.14         750         20539.6           770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15           880         2591.14         870         79286.41         870         25661.3	740	2123.23	730	59184.06	730	19723.51
770         2222.6         760         63293.04         760         20951.75           780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15           880         2591.14         870         79286.41         870         25661.31           890         2624.96         880         80811.12         880         26105.	750	2156.3	740	60541.46	740	20130.18
780         2255.83         770         64687.13         770         21366.63           790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15           880         2591.14         870         79286.41         870         25661.31           890         2624.96         880         80811.12         880         26105.02           910         2658.82         890         82347.42         890         26551	760	2189.42	750	61911.14	750	20539.6
790         2289.13         780         66093.34         780         21784.22           800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15           880         2591.14         870         79286.41         870         25661.31           890         2624.96         880         80811.12         880         26105.02           900         2658.82         890         82347.42         890         26551.25           910         2692.73         900         83895.28         900         27000	770	2222.6	760	63293.04	760	20951.75
800         2322.47         790         67511.61         790         22204.48           810         2355.87         800         68941.91         800         22627.42           820         2389.33         810         70384.18         810         23053           830         2422.83         820         71838.36         820         23481.23           840         2456.39         830         73304.42         830         23912.07           850         2490.01         840         74782.3         840         24345.51           860         2523.67         850         76271.95         850         24781.55           870         2557.38         860         77773.34         860         25220.15           880         2591.14         870         79286.41         870         25661.31           890         2624.96         880         80811.12         880         26105.02           900         2658.82         890         82347.42         890         26551.25           910         2692.73         900         83895.28         900         27000           920         2726.68         910         85454.64         910         27451.25	780	2255.83	770	64687.13	770	21366.63
810       2355.87       800       68941.91       800       22627.42         820       2389.33       810       70384.18       810       23053         830       2422.83       820       71838.36       820       23481.23         840       2456.39       830       73304.42       830       23912.07         850       2490.01       840       74782.3       840       24345.51         860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	790	2289.13	780	66093.34	780	21784.22
820       2389.33       810       70384.18       810       23053         830       2422.83       820       71838.36       820       23481.23         840       2456.39       830       73304.42       830       23912.07         850       2490.01       840       74782.3       840       24345.51         860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	800	2322.47	790	67511.61	790	22204.48
830       2422.83       820       71838.36       820       23481.23         840       2456.39       830       73304.42       830       23912.07         850       2490.01       840       74782.3       840       24345.51         860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	810	2355.87	800	68941.91	800	22627.42
840       2456.39       830       73304.42       830       23912.07         850       2490.01       840       74782.3       840       24345.51         860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	820	2389.33	810	70384.18	810	23053
850       2490.01       840       74782.3       840       24345.51         860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	830	2422.83	820	71838.36	820	23481.23
860       2523.67       850       76271.95       850       24781.55         870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	840	2456.39	830	73304.42	830	23912.07
870       2557.38       860       77773.34       860       25220.15         880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	850	2490.01	840	74782.3	840	24345.51
880       2591.14       870       79286.41       870       25661.31         890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	860	2523.67	850	76271.95	850	24781.55
890       2624.96       880       80811.12       880       26105.02         900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	870	2557.38	860	77773.34	860	25220.15
900       2658.82       890       82347.42       890       26551.25         910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	880	2591.14	870	79286.41	870	25661.31
910       2692.73       900       83895.28       900       27000         920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	890	2624.96	880	80811.12	880	26105.02
920       2726.68       910       85454.64       910       27451.25         930       2760.69       920       87025.47       920       27904.98	900	2658.82	890	82347.42	890	26551.25
930 2760.69 920 87025.47 920 27904.98	910	2692.73	900	83895.28	900	27000
	920	2726.68	910	85454.64	910	27451.25
040 2704.74 030 99607.73 030 20364.40	930	2760.69	920	87025.47	920	27904.98
3-0 2134.14 350 00001.15 350 20301.19	940	2794.74	930	88607.73	930	28361.19
950 2828.84 940 90201.36 940 28819.85		2828.84	940	90201.36	940	28819.85
	960	2862.98	950	91806.34	950	29280.97
060 2962.09 050 04006.24 050 20200.07	900	2002.90	930	91000.34	900	29200.97

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970	2897.17	960	93422.63	960	29744.51
980	2931.4	970	95050.17	970	30210.48
990	2965.68	980	96688.94	980	30678.85
1000	3000	990	98338.9	990	31149.62
		1000	100000	1000	31622.78