Compound Interest Tables

Discrete End-Of-Period Compounding

Tables for:

1/4%	1/2%	3/4%	1%	11/4%	11/2%
13/4%	2%	21/2%	3%	31/2%	4%
41/2%	5%	6%	7%	8%	9%
10%	12%	15%	18%	20%	25%
30%	35%	40%	45%	50%	60%

Values Of Interest Factors When N Equals Infinity

Single Payment:

$$(F/P,i,\infty) = \infty$$

$$(P/F,i,\infty) = 0$$

Arithmetic Gradient Series:

$$(A/G,i,\infty) = 1/i$$

$$(P/G,i,\infty) = 1/i^2$$

Uniform Payment Series:

$$(A/F,i,\infty) = 0$$

$$(A/P,i,\infty) = i$$

$$(F/A,i,\infty) = \infty$$

$$(P/A,i,\infty) = 1/i$$

	Single Pa	yment		Uniform P	ayment Series	s	Arithmeti	c Gradient	1
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
	Find F Given P	Find P Given F	Find A Given F A/F	Find A Given P A/P	Find F Given A F/A	Find P Given A P/A	Find A Given G A/G	Find P Given G P/G	n
<u>n</u>	F/P	P/F	A/F						
1 2	1.010 1.020	.9901 .9803	1.0000 .4975	1.0100 .5075	1.000 2.010	0.990 1.970	0 0.498	0 0.980	1 2
2 3	1.030	.9706	.3300	.3400	3.030	2.941	0.993	2.921	2 3 4
4	1.041	.9610	.2463	.2563	4.060 5.101	3.902 4.853	1.488 1.980	5.804 9.610	5
5	1.051	.9515	.1960	.2060	3.101	4.033	1.700	7.010	
6 7	1.062	.9420	.1625	.1725	6.152	5.795	2.471	14.320 19.917	6 7
7	1.072	.9327 .9235	.1386 .1207	.1486 .1307	7.214 8.286	6.728 7.652	2.960 3.448	26.381	8
8 9	1.083 1.094	.9233 .9143	.1267	.1167	9.369	8.566	3.934	33.695	9
10	1.105	.9053	.0956	.1056	10.462	9.471	4.418	41.843	10
11	1.116	.8963	.0865	.0965	11.567	10.368	4.900	50.806	11
12	1.127	.8874	.0788	.0888	12.682	11.255	5.381	60.568	12
13	1.138	.8787	.0724	.0824	13.809	12.134	5.861	71.112	13
14	1.149	.8700	.0669	.0769 .0721	14.947 16.097	13.004 13.865	6.338 6.814	82.422 94.481	14 15
15	1.161	.8613	.0621	.0721	10.097	13.603		74,401	
16	1.173	.8528	.0579	.0679	17.258	14.718	7.289	107.273	16
17	1.184	.8444	.0543	.0643	18.430	15.562	7.761	120.783 134.995	17 18
18	1.196	.8360	.0510	.0610 .0581	19.615 20.811	16.398 17.226	8.232 8.702	134.993	19
19 20	1.208 1.220	.8277 .8195	.0481 .0454	.0554	22.019	18.046	9.169	165.465	20
						10 067	0.625	181.694	21
21 22	1.232 1.245	.8114 .8034	.0430 .0409	.0530 .0509	23.239 24.472	18.857 19.660	9.635 10.100	198.565	22
23	1.243	.7954	.0389	.0489	25.716	20.456	10.563	216.065	23
24	1.270	.7876	.0371	.0471	26.973	21.243	11.024	234.179	24
25	1.282	.7798	.0354	.0454	28.243	22.023	11.483	252.892	25
26	1.295	.7720	.0339	.0439	29.526	22.795	11.941	272.195	26
27	1.308	.7644	.0324	.0424	30.821	23.560	12.397	292.069 312.504	27 28
28	1.321 1.335	.7568 .7493	.0311 .0299	.0411 .0399	32.129 33.450	24.316 25.066	12.852 13.304	333.486	29
29 30	1.348	.7419	.0287	.0387	34.785	25.808	13.756	355.001	30
		(000	0222	.0332	43.077	30.107	16.428	494.620	36
36 40	1.431 1.489	.6989 .6717	.0232 .0205	.0332	48.886	32.835	18.178	596.854	40
48	1.612	.6203	.0163	.0263	61.223	37.974	21.598	820.144	48
50	1.645	.6080	.0155	.0255	64.463	39.196	22.436	879.417 939.916	50 52
52	1.678	.5961	.0148	.0248	67.769	40.394	23.269	939.710	32
60	1.817	.5504	.0122	.0222	81.670	44.955		1 192.80	60
70	2.007	.4983	00993	.0199	100.676	50.168		1 528.64 1 597.86	70 72
72 80	2.047 2.217	.4885 .4511	.00955 .00822	.0196 .0182	104.710 121.671	51.150 54.888		1 879.87	80
84	2.307	.4335	.00765	.0177	130.672	56.648		2 023.31	84
00	2.449	.4084	.00690	.0169	144.863	59.161	37.872	2 240.56	90
90 96	2.449	.3847	.00625	.0163	159.927	61.528		2 459.42	96
100	2.705	.3697	.00587	.0159	170.481	63.029	41.343	2 605.77	100
104	2.815	.3553	.00551	.0155	181.464	64.471		2 752.17 3 334.11	104 120
120	3.300	.3030	.00435	.0143	230.039	69.701	47.835	J JJ4.11	120
240	10.893	.0918	.00101	.0110	989.254	90.819		6 878.59	240
360	35.950	.0278	.00029	.0103	3 495.0	97.218		8 720.43 9 511.15	360 480
480	118.648	.00843	.00008	.0101	11 764.8	99.157	95.920	7 311.13	700

Compound Present Factor		Single Pa	yment	Uniform Payment Series				Arithmeti	c Gradient	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Compound Amount	Present Worth	Fund	Recovery	Amount	Worth	Uniform	Present	
1.102 9070 4478 3378 2.050 1.859 0.488 0.907 2.33 1.158 8638 3.172 3	n	Given P	Given F	Given F	Given P	Given A	Given A	Given G	Given G	n
2 1.102 9070 4878 5378 2.050 1.859 0.488 0.907 2.635 3 4 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 1.216 8227 2320 2820 4.310 3.546 1.439 5.103 4 1.216 1.216 1.216 1.216 1.228 1.2	1	1.050	.9524							1
4 1.216 8227 .2320 .2820 4.310 5.526 4.329 1.902 8.237 5 5 1.276 7835 .1810 .2310 5.526 4.329 1.902 8.237 5 6 1.340 .7462 .1470 .1970 6.802 5.076 2.358 11.968 6 7 1.407 .7107 .1228 .1728 8.142 5.786 2.805 16.232 7 8 1.477 .6768 .1047 .1547 9.549 6.463 3.244 20.970 8 9 1.551 .6446 .0907 .1407 .11027 7.108 3.676 26.127 9 10 1.629 .6139 .0795 .1295 12.578 7.722 4.099 31.652 10 11 1.710 .5847 .0704 .1204 14.207 8.306 4.514 37.499 11 12 1.796 .5568 .0628 .1128 15.917 8.863 4.922 43.621 12 13 1.886 .5303 .0565 .1065 17.713 9.394 5.321 449.88 13 14 1.980 .5051 .0510 .1010 19.599 9.899 5.713 56.553 14 15 2.079 .4810 .0463 .0963 21.579 10.380 6.097 63.288 15 16 2.183 .4581 .0423 .0923 23.657 10.380 6.097 63.288 15 17 2.292 .4363 .0387 .0887 25.840 11.274 6.842 77.140 17 18 2.407 .4155 .0355 .0855 .0855 28.132 11.690 7.203 84.204 18 19 2.527 .3957 .0327 .0827 30.539 12.085 7.557 91.037 99.37 19.327 19 20 2.653 .3769 .0302 .0802 33.066 12.462 7.903 98.488 20 21 2.786 .3889 .0280 .0780 35.719 12.821 8.872 112.846 22 23 3.072 .3256 .0241 .0741 41.430 13.489 8.897 120.08 23 24 3.225 .3101 .0225 .07725 44.502 13.799 9.121 12.818 8.2407 .1416 .0240 .0063 .0063 54.699 14.430 13.489 8.897 120.08 23 24 3.225 .3101 .0225 .07725 44.502 13.799 9.214 127.140 24 25 3.386 .2953 .0210 .0710 47.727 14.094 9.524 134.227 25 26 3.556 .2812 .0196 .0696 51.113 14.375 9.827 11.2816 .222 27 3 3.733 .2678 .0183 .0683 54.669 14.643 10.122 148.222 27 28 3.920 .2551 .0717 .0671 58.402 14.898 10.411 1.551.10 28 29 4.116 .2429 .0160 .0660 .0563 51.603 11.377 12.890 14.342 22 25 34 4.525 .1904 .0118 .0618 85.067 16.193 12.006 194.416 34 35 5.516 .1813 .0111 .0611 90.320 16.374 14.258 13.999 .0168 .025 14.636 .0683 .00367 .0537 57.599 17.774 14.094 9.524 134.227 25 26 3.586 .2812 .0196 .0696 .0563 51.696 14.643 10.122 148.222 27 27 3.733 .2678 .0082 .0082 .0082 .0083 .0083 .0083 .10.003 .11.757 188.135 33 34 4.538 .2004 .0141 .0641 .70.761 15.593 11.238 175.233 31 34 4.538 .2004 .0141 .0641 .70.761 15.593 11.238 175.243 10.969 .0080 .0080 .0080 .0080 .	2	1.102	.9070							3
6 1.340 .7462 .1470 .1970 .6.802 .5.076 .2.358 .11.968 .6 7 1.407 .7107 .1228 .1728 .8.142 .5.786 .2.805 .16.232 .7 8 1.477 .6768 .1047 .1547 .9.549 .6.463 .3.244 .20.970 .8 9 1.551 .6.446 .0.907 .1.407 .11.027 .7.108 .3.676 .26.127 .9 10 1.629 .6139 .0.795 .1295 .12.578 .7.722 .4.099 .31.652 .10 11 1.710 .5847 .0.704 .1204 .14.207 .8.306 .4.514 .37.499 .11 12 1.796 .5568 .0628 .1128 .15.917 .8.863 .4.922 .43.624 .12 13 1.886 .5303 .0.565 .1065 .1055 .17.713 .9.394 .5.321 .49.98 .13 14 1.980 .5051 .0.510 .1010 .19.599 .8.899 .5.713 .56.553 .14 15 2.079 .4810 .0463 .0963 .21.579 .10.838 .6.097 .63.288 .15 16 2.183 .4581 .0.423 .0.923 .23.657 .10.838 .6.097 .63.288 .15 16 2.183 .4581 .0.423 .0.923 .23.657 .10.838 .6.474 .70.159 .16 17 2.292 .4363 .0.387 .0.887 .25.840 .11.274 .6.842 .77.140 .17 18 2.407 .4155 .0.355 .0.855 .28.132 .11.690 .7.203 .84.204 .18 19 2.527 .3.957 .0.327 .0.827 .30.539 .12.085 .7.557 .91.327 .19 20 2.653 .3769 .0.302 .0.802 .33.066 .12.462 .7.903 .98.488 .20 21 2.786 .3589 .0280 .0780 .35.719 .12.821 .8.242 .105.667 .21 22 2.925 .3419 .0.260 .0.760 .38.505 .13.163 .8.573 .112.846 .22 23 3.072 .3.256 .0.241 .0.741 .41.430 .13.489 .8.897 .12.800 .98.88 .20 21 2.786 .3589 .0.280 .0.0780 .35.719 .12.821 .8.242 .105.667 .21 22 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .9.214 .127.140 .24 25 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .9.214 .127.140 .24 25 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .9.214 .127.140 .24 25 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .9.214 .127.140 .24 25 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .9.214 .127.140 .24 25 3.336 .2953 .0.210 .0.0710 .8.402 .13.799 .1.282 .13.282 .13.299 .1.282 .13.299 .1.282 .2925 .3.141 .0.641 .0.641 .7.701 .1.599 .1.593 .1.501 .181.391 .10.691 .1.663 .1.593 .1.503 .1.501 .181.391 .1.501 .1.661 .0.661 .66.439 .15.372 .10.969 .168.622 .30 31 4.538 .204 .0.114 .0.641 .0.641 .7.701 .1.599 .1.590 .1.59	3									4
7 1.407 .7107 .1228 .1728 .8 1.142 5.786 .2.805 16.232 7 8 1.407 .6768 .1047 .1.547 9.549 6.463 3.244 20.970 8 9 1.551 .6446 .0907 .1407 11.027 7.108 3.676 26.127 9 10 1.629 .6139 .0795 .1295 12.578 7.722 4.099 31.652 10 11 1.710 .5847 .0704 .1204 14.207 8.306 4.514 37.499 11 12 1.796 .5568 .0628 .1128 15.917 8.863 4.922 43.624 12 13 1.886 .5303 .0565 .1065 17.713 9.394 5.321 49.988 13 14 1.980 .5051 .0510 .1010 19.599 9.899 5.713 56.553 14 15 2.079 .4810 .0463 .0963 21.579 10.380 6.097 63.288 15 16 2.183 .4581 .0423 .0923 23.657 10.838 6.097 63.288 15 16 2.183 .4581 .0423 .0923 23.657 10.838 6.744 70.159 16 17 2.292 .4363 .0387 .0887 25.840 11.274 6.842 77.140 17 18 2.407 .4155 .0355 .0855 28.132 11.690 7.203 84.204 18 19 2.527 .3957 .0327 .0827 30.539 12.085 7.557 91.327 19 20 2.653 .3769 .0302 .0802 .33.066 12.462 7.903 98.488 20 21 2.786 .3589 .0280 .0780 .35.719 12.821 8.242 105.667 21 22 2.925 .3419 .0260 .0760 .38.505 13.163 8.573 112.846 22 23 3.072 .3256 .0241 .0741 41.435 13.163 8.573 112.846 22 23 3.3072 .3256 .0241 .0741 41.435 13.163 8.573 112.846 22 23 3.386 .2953 .0210 .0710 47.727 14.094 9.524 134.227 25 26 3.556 .2812 .0196 .0696 51.113 14.375 9.827 141.258 26 27 3.733 .2678 .0183 .0683 54.669 14.643 10.122 148.222 27 28 3.920 .2551 .0171 .0671 58.402 14.898 10.411 55.110 .88 3 9.20 .2551 .0171 .0671 .8643 15.593 11.238 175.233 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.233 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.233 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.233 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.23 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.23 31 3 4 538 .2204 .0141 .0641 70.761 15.593 11.238 175.23 31 3 5 .003 .1999 .0125 .0625 80.063 16.003 11.757 188.135 33 3 5 .003 .1999 .0125 .0625 80.063 16.003 11.757 188.135 33 3 5 .003 .1999 .0125 .0625 80.063 15.969 17.774 14.364 .255.314 455 5 14.636 .0683 .00367 .0537 .72751 18.803 31.500 184.404 35.555 30.000 .0517 .0518 .0508 30.508 12.451 19.684 18.635 35.9646 80 85 63.238 40	5									5
1.407	4	1.340	7462	1470	1970	6.802	5.076	2.358	11.968	6
8 1.477 6.6768 1.047 1.1547 9.349 6.403 3.244 2.0970 9 9 1.551 6.446 0.907 1.407 11.027 7.108 3.676 26.127 9 10 1.629 6.139 0.795 1.1295 12.578 7.722 4.099 31.652 10 11 1.710 5.847 0.704 1.1204 14.207 8.306 4.514 37.499 11 12 1.796 5.5568 0.628 1.128 15.917 8.863 4.922 43.624 12 13 1.886 5.303 0.565 1.0055 17.713 9.394 5.321 49.988 13 14 1.980 5.051 0.510 1.010 19.599 9.889 5.713 56.533 14 1.980 5.051 0.0510 1.010 19.599 9.889 5.713 56.533 14 1.980 5.051 0.0510 1.010 19.599 9.899 5.713 56.533 14 1.980 5.051 0.0510 1.010 19.599 9.899 5.713 56.533 14 1.980 5.051 0.0510 1.010 19.599 1.005 6.097 6.3288 15 16 2.183 4581 0.0423 0.0923 23.657 10.838 6.474 70.159 16 17 2.292 4363 0.387 0.0887 25.840 11.274 6.842 77.140 17 18 2.407 4.155 0.0355 0.0855 28.132 11.600 7.203 84.204 18 19 2.527 3.957 0.0327 0.0827 30.539 12.085 7.557 91.327 19 20 2.653 3.769 0.0302 0.0802 33.066 12.462 7.903 98.488 20 21 2.786 3.5889 0.0280 0.780 35.71 12.821 8.242 105.667 21 2.2925 3.419 0.0260 0.0760 38.505 13.163 8.573 112.846 22 2.3 3.072 3.256 0.0241 0.0741 41.430 13.489 8.897 120.008 23 2.4 3.225 3.101 0.0225 0.0725 44.502 13.799 9.214 127.140 24 2.5 3.386 2.2953 0.0210 0.0710 47.727 14.094 9.524 134.227 25 26 3.556 0.2812 0.196 0.696 51.113 14.375 9.827 141.258 26 27 3.733 0.2678 0.183 0.683 54.669 14.643 10.122 148.222 27 28 3.920 2.551 0.171 0.671 58.402 14.898 10.411 155.110 28 29 4.116 2.429 0.160 0.6660 62.323 15.141 10.694 161.912 29 30 4.322 2.314 0.151 0.6611 66.439 15.372 10.969 161.912 29 31 4.538 2.204 0.141 0.641 70.761 15.593 11.238 175.233 31 32 4.765 2.099 0.133 0.663 75.299 15.803 11.501 181.739 32 33 5.003 1.999 0.125 0.625 80.663 16.003 11.501 181.739 32 34 5.551 1.813 0.0111 0.6611 90.320 16.374 12.250 200.580 35 34 5.553 1.904 0.118 0.618 85.667 16.193 12.006 194.416 34 35 5.516 1.813 0.111 0.6611 90.320 16.374 12.250 200.580 35 40 7.040 1.420 0.0828 0.0583 120.799 17.159 13.377 2.9545 40 45 8.985 111.467 0.0872 0.00478 0.0583 120.799 17.159 13.377 2.9545 40 45 8.985 111.00049 0.00219 0.0522 456.795 19.161 17.154	7					8.142	5.786	2.805	16.232	7
10 1.629 6.139 0.0795 1.1295 12.578 7.722 4.099 31.652 10 11 1.710 5.847 0.704 1.204 14.207 8.306 4.514 37.499 11 12 1.796 5.568 0.628 1.128 15.917 8.863 4.922 43.624 12 13 1.886 5.303 0.565 1.065 17.713 9.394 5.321 49.988 13 14 1.980 5.051 0.510 1.1010 19.599 9.899 5.713 56.553 14 15 2.079 4.810 0.463 0.963 21.579 10.380 6.097 63.288 15 16 2.183 4.581 0.423 0.923 23.657 10.838 6.474 70.159 16 17 2.292 4.363 0.387 0.887 25.840 11.274 6.842 77.140 17 18 2.407 4.155 0.355 0.855 28.132 11.690 7.203 84.204 18 19 2.527 3.957 0.3027 0.827 30.539 12.085 7.557 91.327 19 20 2.653 3.769 0.302 0.802 33.066 12.462 7.903 98.488 20 21 2.786 3.589 0.280 0.780 35.719 12.821 8.242 105.667 21 22 2.925 3.419 0.260 0.760 38.505 13.163 8.573 112.846 22 23 3.072 3.256 0.241 0.741 41.430 13.489 8.897 120.008 23 24 3.225 3.101 0.0225 0.0725 44.502 13.799 9.214 127.140 24 25 3.386 2.2953 0.210 0.710 47.727 14.094 9.524 134.227 25 26 3.556 2.812 0.196 0.6696 51.113 14.375 9.827 141.258 26 27 3.733 2.678 0.183 0.683 54.669 14.643 10.122 148.222 27 28 3.920 2.551 0.171 0.671 58.402 14.898 10.411 1.55.110 28 29 4.116 2.429 0.160 0.660 62.323 15.141 10.694 161.912 29 30 4.322 2.314 0.151 0.661 66.439 15.372 10.969 11.551 11.55.110 28 29 4.116 2.429 0.160 0.660 62.323 15.141 10.694 161.912 29 31 4.538 2.204 0.141 0.641 70.761 15.593 11.238 175.233 31 32 4.765 2.099 0.133 0.6633 75.299 15.803 11.501 181.739 32 33 5.003 1.999 0.125 0.625 80.063 16.003 11.757 188.135 33 34 5.5516 1.813 0.111 0.6611 90.320 16.374 12.250 200.580 35 40 7.040 1.420 0.0828 0.058 0.058 12.079 17.159 13.377 2.95.454 0.044 18.649 0.058 3	8	1.477	.6768	.1047						8
11 1.710 5.847 .0704 .1204 14.207 8.306 4.514 37.499 11 12 1.796 .5568 .0628 .1128 15.917 8.863 4.922 43.624 12 13 1.886 .5303 .0565 .1065 17.713 9.394 5.321 49.988 13 14 1.980 .5051 .010 19.599 .9899 5.713 56.553 14 15 2.079 .4810 .0463 .0963 21.579 10.380 6.097 63.288 15 16 2.183 .4581 .0423 .0923 23.657 10.838 6.474 70.159 16 17 2.292 .4363 .0387 .0885 28.132 11.690 7.203 84.204 18 18 2.407 .4155 .0335 .0855 28.132 11.690 7.203 84.204 18 21 2.786 .3589 .0280	9									10
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31 4.765 .2099 .0133 .0633 75.299 15.803 11.501 181.739 32 33 5.003 .1999 .0125 .0625 80.063 16.003 11.757 188.135 33 34 5.253 .1904 .0118 .0618 85.067 16.193 12.006 194.416 34 35 5.516 .1813 .0111 .0611 90.320 16.374 12.250 200.580 35 40 7.040 .1420 .00828 .0583 120.799 17.159 13.377 229.545 40 45 8.985 .1113 .00626 .0563 159.699 17.774 14.364 255.314 45 50 11.467 .0872 .00478 .0548 209.347 18.256 15.223 277.914 50 55 14.636 .0683 .00367 .0537 272.711 18.633 15.966 297.510 55 60 18.679 .0535 .00283 .0528 353.582 18.929 16.606 314.343 <th></th> <th></th> <th>2204</th> <th>0141</th> <th>0641</th> <th>70 761</th> <th>15.593</th> <th>11.238</th> <th>175.233</th> <th>31</th>			2204	0141	0641	70 761	15.593	11.238	175.233	31
33 5.003 .1999 .0125 .0625 80.063 16.003 11.757 188.135 33 34 5.253 .1904 .0118 .0618 85.067 16.193 12.006 194.416 34 35 5.516 .1813 .0111 .0611 90.320 16.374 12.250 200.580 35 40 7.040 .1420 .00828 .0583 120.799 17.159 13.377 229.545 40 45 8.985 .1113 .00626 .0563 .159.699 17.774 14.364 .255.314 45 50 11.467 .0872 .00478 .0548 .209.347 18.256 15.223 .277.914 50 55 14.636 .0683 .00367 .0537 .272.711 18.633 15.966 .297.510 55 60 18.679 .0535 .00283 .0522 456.795 19.161 17.154 328.691 65 70			.2099					11.501	181.739	32
35 5.516 .1813 .0111 .0611 90.320 16.374 12.250 200.580 35 40 7.040 .1420 .00828 .0583 .120.799 17.159 13.377 .229.545 40 45 8.985 .1113 .00626 .0563 .159.699 17.774 .14.364 .255.314 45 50 11.467 .0872 .00478 .0548 .209.347 18.256 15.223 .277.914 50 55 .14.636 .0683 .00367 .0537 .272.711 .18.633 .15.966 .297.510 .55 60 .18.679 .0535 .00283 .0528 .353.582 .18.929 .16.606 .314.343 60 65 .23.840 .0419 .00219 .0522 .456.795 .19.161 .17.154 .328.691 .65 70 .30.426 .0329 .00170 .0517 .588.525 .19.343 .17.621 .340.841 .70		5.003	.1999	.0125	.0625					
40 7 040 .1420 .00828 .0583 .120.799 17.159 13.377 .229.545 .40 45 8.985 .1113 .00626 .0563 .159.699 17.774 .14.364 .255.314 .45 50 11.467 .0872 .00478 .0548 .209.347 18.256 15.223 .277.914 .50 55 14.636 .0683 .00367 .0537 .272.711 18.633 .15.966 .297.510 .55 60 18.679 .0535 .00283 .0528 .353.582 18.929 16.606 .314.343 60 65 23.840 .0419 .00219 .0522 .456.795 19.161 17.154 .328.691 65 70 .30.426 .0329 .00170 .0517 .588.525 19.343 17.621 .340.841 .70 75 .38.832 .0258 .00132 .0513 .756.649 19.485 18.018 .351.072 .75	34									
45 8.985 1113 .00626 .0563 159.699 17.774 14.364 255.314 45 50 11.467 .0872 .00478 .0548 209.347 18.256 15.223 277.914 50 55 14.636 .0683 .00367 .0537 272.711 18.633 15.966 297.510 55 60 18.679 .0535 .00283 .0528 353.582 18.929 16.606 314.343 60 65 23.840 .0419 .00219 .0522 456.795 19.161 17.154 328.691 65 70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95	35	5.516	.1813	.0111	.0011	90.320			-	
50 11.467 .0872 .00478 .0548 209.347 18.256 15.223 277.914 50 55 14.636 .0683 .00367 .0537 272.711 18.633 15.966 297.510 55 60 18.679 .0535 .00283 .0528 353.582 18.929 16.606 314.343 60 65 23.840 .0419 .00219 .0522 456.795 19.161 17.154 328.691 65 70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871										
55 14.636 .0683 .00367 .0537 272.711 18.633 15.966 297.510 55 60 18.679 .0535 .00283 .0528 353.582 18.929 16.606 314.343 60 65 23.840 .0419 .00219 .0522 456.795 19.161 17.154 328.691 65 70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95										
60 18.679 .0535 .00283 .0528 353.582 18.929 16.606 314.343 60 65 23.840 .0419 .00219 .0522 456.795 19.161 17.154 328.691 65 70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069										
70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 100 .000									314.343	60
70 30.426 .0329 .00170 .0517 588.525 19.343 17.621 340.841 70 75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.024 321.740 95	65	23.840	.0419	.00219						
75 38.832 .0258 .00132 .0513 756.649 19.485 18.018 351.072 75 80 49.561 .0202 .00103 .0510 971.222 19.596 18.353 359.646 80 85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 96 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95	70	30.426	.0329	.00170	.0517					
85 63.254 .0158 .00080 .0508 1 245.1 19.684 18.635 366.800 85 90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.479 100										
90 80.730 .0124 .00063 .0506 1 594.6 19.752 18.871 372.749 90 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95 103.034 .00971 .00049 .0505 2 040.7 19.806 19.069 377.677 95										
95 103.034 .00971 .00049 .0505 2.040.7 19.806 19.069 377.677 95									272 740	በ ባ
95 105.054 .0071 .0071 .0071 .0071 .0071 .0071										

	Single Pa	yment	Uniform Payment Series				Arithmeti		
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
n	Find F Given P F/P	Find P Given F P/F	Find A Given F A/F	Find A Given P A/P	Find F Given A F/A	Find P Given A P/A	Find A Given G A/G	Find P Given G P/G	n
1	1.090	.9174	1.0000	1.0900	1.000	0.917	0	0	1
2 3	1.188	.8417	.4785	.5685	2.090 3.278	1.759 2.531	0.478 0.943	0.842 2.386	2 3 4
3	1.295	.7722 .7084	.3051 .2187	.3951 .3087	4.573	3.240	1.393	4.511	4
4 5	1.412 1.539	.6499	.1671	.2571	5.985	3.890	1.828	7.111	5
6	1.677	.5963	.1329	.2229	7.523	4.486	2.250	10.092	6
7	1.828	.5470	.1087	.1987	9.200	5.033	2.657	13.375	7 8
7 8	1.993	.5019	.0907	.1807	11.028	5.535	3.051 3.431	16.888 20.571	9
9	2.172	.4604	.0768	.1668	13.021 15.193	5.995 6.418	3.431	24.373	1Ó
10	2.367	.4224	.0658	.1558					
11	2.580	.3875	.0569	.1469	17.560	6.805	4.151	28.248 32.159	11 12
12	2.813	.3555	.0497	.1397	20.141 22.953	7.161 7.487	4.491 4.818	36.073	13
13	3.066	.3262	.0436 .0384	.1336 .1284	26.019	7.786	5.133	39.963	14
14 15	3.342 3.642	.2992 .2745	.0341	.1241	29.361	8.061	5.435	43.807	15
16	3.970	.2519	.0303	.1203	33.003	8.313	5.724	47.585	16
17	4.328	.2311	.0270	.1170	36.974	8.544	6.002	51.282	17
18	4.717	.2120	.0242	.1142	41.301	8.756	6.269	54.886 58.387	18 19
19	5.142	.1945	.0217	.1117	46.019 51.160	8.950 9.129	6.524 6.767	61.777	20
20	5.604	.1784	.0195	.1095					
21	6.109	.1637	.0176	.1076	56.765	9.292	7.001	65.051	21 22
22	6.659	.1502	.0159	.1059	62.873	9.442 9.580	7.223 7.436	68.205 71.236	23
23	7.258	.1378	.0144	.1044 .1030	69.532 76.790	9.360 9.707	7.638	74.143	24
24 25	7.911 8.623	.1264 .1160	.0130 .0118	.1018	84.701	9.823	7.832	76.927	25
26	9.399	.1064	.0107	.1007	93.324	9.929	8.016	79.586	26
27	10.245	.0976	.00973	.0997	102.723	10.027	8.191	82.124	27
28	11.167	.0895	.00885	.0989	112.968	10.116	8.357 8.515	84.542 86.842	28 29
29	12.172	.0822	.00806	.0981 .0973	124.136 136.308	10.198 10.274	8.666	89.028	30
30	13.268	.0754						91.102	31
31	14.462	.0691	.00669		149.575 164.037	10.343 10.406	8.808 8.944	93.069	32
32	15.763	.0634	.00610 .00556	.0961 .0956	179.801	10.464	9.072	94.931	33
33 34	17.182 18.728	.0582 .0534	.00508		196.983	10.518	9.193	96.693	34
35	20.414	.0490	.00464		215.711	10.567	9.308	98.359	35
40	31.409	.0318	.00296	.0930	337.883	10.757	9.796	105.376	40
45	48.327	.0207	.00190	.0919	525.860	10.881	10.160	110.556	45 50
50	74.358	.0134	.00123		815.085 1 260.1	10.962 11.014	10.430 10.626	114.325 117.036	55
55	114.409	.00874	.00079		1 944.8	11.014	10.020	118.968	60
60	176.032	.00568	.00051						
65	270.847	.00369	.00033		2 998.3	11.070 11.084	10.870 10.943	120.334 121.294	65 70
70	416.731	.00240 .00156	.00022 .00014		4 619.2 7 113.3	11.084	10.943	121.965	75
75 80	641.193 986.555	.00136	.00014		10 950.6	11.100	11.030	122.431	80
85	1 517.9	.00066	.00006		16 854.9	11.104	11.055	122.753	85
90	2 335.5	.00043	.00004		25 939.3	11.106	11.073	122.976	90
95	3 593.5	.00028	.00003		39 916.8	11.108	11.085	123.129 123.233	95 100
100	5 529.1	.00018	.00002	.0900	61 422.9	11.109	11.093	143.433	100

			·						
	Single Pay	ment		Uniform	Payment Series		Arithmeti	c Gradient	1 1
	Compound	Present	Sinking	Capital	Compound	Present	Gradient	Gradient	
1	Amount	Worth	Fund	Recovery		Worth	Uniform	Present	
	Factor	Factor	Factor	Factor	Factor	Factor	Series	Worth	1 1
	Find F	Find P	Find A	Find A	Find F	Find P	Find A	Find P	1 1
1	Given P	Given F	Given F	Given P	Given A	Given A	Given G	Given G	
n	F/P	P/F	A/F	A/P	F/A	P/A	A/G	P/G	n
1	1.100	.9091	1.0000	1.1000	1.000	0.909	0	0	1
2	1.210	.8264	.4762	.5762	2.100	1.736	0.476	0.826	2
3	1.331	.7513	.3021	.4021	3.310	2.487	0.937	2.329	3
4	1.464	.6830	.2155	.3155	4.641	3.170	1.381	4.378	4
5	1.611	.6209	.1638	.2638	6.105	3.791	1.810	6.862	5
6	1.772	.5645	.1296	.2296	7.716	4.355	2.224	9.684	6
7	1.949	.5132	.1054	.2054	9.487	4.868	2.622	12.763	7
8	2.144	.4665	.0874	.1874	11.436	5.335	3.004	16.029	8
9	2.358	.4241	.0736	.1736	13.579	5.759	3.372	19.421	9
10	2.594	.3855	.0627	.1627	15.937	6.145	3.725	22.891	10
11	2.853	.3505	.0540	.1540	18.531	6.495	4.064	26.396	11
12	3.138	.3186	.0468	.1468	21.384	6.814	4.388	29.901	12
13	3.452	.2897	.0408	.1408	24.523	7.103	4.699	33.377	13
14	3.797	.2633	.0357	.1357	27.975	7.367	4.996	36.801	14
15	4.177	.2394	.0315	.1315	31.772	7.606	5.279	40.152	15
16	4.595	.2176	.0278	.1278	35.950	7.824	5.549	43.416	16
17	5.054	.1978	.0247	.1247	40.545	8.022	5.807	46.582	17
18	5.560	.1799	.0219	.1219	45.599	8.201	6.053	49.640	18
19	6.116	.1635	.0195	.1195	51.159	8.365	6.286	52.583	19
20	6.728	.1486	.0175	.1175	57.275	8.514	6.508	55.407	20
21	7.400	.1351	.0156	.1156	64.003	8.649	6.719	58.110	21
22	8.140	.1228	.0140	.1140	71.403	8.772	6.919	60.689	22
23	8.954	.1117	.0126	.1126	79.543	8.883	7.108	63.146	23
24	9.850	.1015	.0113	.1113	88.497	8.985	7.288	65.481	24
25	10.835	.0923	.0102	.1102	98.347	9.077	7.458	67.696	25
26	11.918	.0839	.00916	.1092	109.182	9.161	7.619	69.794	26
27	13.110	.0763	.00826	.1083	121.100	9.237	7.770	71.777	27
28	14.421	.0693	.00745	.1075	134.210	9.307	7.914	73.650	28
29 30	15.863 17.449	.0630 .0573	.00673 .00608	.1067 .1061	148.631 164.494	9.370 9.427	8.049 8.176	75.415 77.077	29 30
30	17.449	.0373	.00000	.1001			6.170	77.077	30
31	19.194	.0521	.00550		181.944	9.479	8.296	78.640	31
32	21.114	.0474	.00497	.1050	201.138	9.526 9.569	8.409	80.108	32
33	23.225	.0431 .0391	.00450		222.252 245.477	9.569 9.609	8.515 8.615	81.486 82.777	33 34
34 35	25.548 28.102	.0356	.00407	.1041	271.025	9.644	8.709	83.987	35
						0.000			
40	45.259	.0221	.00226	.1023	442.593	9.779	9.096	88.953	40
45 50	72.891 117.391	.0137 .00852	.00139	.1014 .1009	718.905 1 163.9	9.863 9.915	9.374 9.570	92.454 94.889	45 50
50 55	117.391	.00832	.00053	.1009	1 880.6	9.913	9.370 9.708	94.889 96.562	55
60	304.482	.00329	.00033	.1003	3 034.8	9.967	9.802	97.701	60
4 E	400 271	.00204	.00020	.1002	4 893.7	9.980	9.867	98.471	65
65 70	490.371 789.748	.00204	.00020	.1002	4 693.7 7 887.5	9.980	9.807 9.911	98.471 98.987	70
75	1 271.9	.00127	.000013	.1001	12 709.0	9.992	9.941	99.332	75
80	2 048.4	.00049	.00005	.1000	20 474.0	9.995	9.961	99.561	80
85	3 299.0	.00030	.00003	.1000	32 979.7	9.997	9.974	99.712	85
90	5 313.0	.00019	.00002	.1000	53 120.3	9.998	9.983	99.812	90
95	8 556.7	.00013	.00002	.1000	85 556.9	9.999	9.989	99.877	95
100	13 780.6	.00007	.00001	.1000	137 796.3	9.999	9.993	99.920	100

	Single Pay	ment	Uniform Payment Series				Arithmeti		
1 1	Compound	Present	Sinking	Capital	Compound	Present	Gradient	Gradient	
1 1	Amount	Worth	Fund	Recovery	Amount	Worth	Uniform	Present	
	Factor	Factor	Factor	Factor	Factor	Factor	Series	Worth	
1 -						Find P	Find A	Find P	
	Find F	Find P	Find A	Find A	Find F	Given A	Given G	Given G	
	Given P	Given F	Given F		Given A	P/A	A/G	P/G	n
n	F/P	P/F	A/F	A/P	F/A	F/A	A/O	170	
	1 120	.8929	1.0000	1.1200	1.000	0.893	0	0	1
1	1.120	.7972	.4717	.5917	2.120	1.690	0.472	0.797	2
2 3	1.254	.7118	.2963	.4163	3.374	2.402	0.925	2.221	3
3	1.405	.6355	.2092	.3292	4.779	3.037	1.359	4.127	3
4 5	1.574 1.762	.5674	.1574	.2774	6.353	3.605	1.775	6.397	5
3	1.702	.3074	.1374	.2774	0.555				
6	1.974	.5066	.1232	.2432	8.115	4.111	2.172	8.930	6
7	2.211	.4523	.0991	.2191	10.089	4.564	2.551	11.644	7
8	2.476	.4039	.0813	.2013	12.300	4.968	2.913	14.471	8
9	2.773	.3606	.0677	.1877	14.776	5.328	3.257	17.356	9
10	3.106	.3220	.0570	.1770	17.549	5.650	3.585	20.254	10
10	5.100	 -					• 605	22 120	11
11	3.479	.2875	.0484	.1684	20.655	5.938	3.895	23.129	11
12	3.896	.2567	.0414	.1614	24.133	6.194	4.190	25.952	12 13
13	4.363	.2292	.0357	.1557	28.029	6.424	4.468	28.702	
14	4.887	.2046	.0309	.1509	32.393	6.628	4.732	31.362	14 15
15	5.474	.1827	.0268	. 1468	37.280	6.811	4.980	33.920	15
					40.763	6.074	5.215	36.367	16
16	6.130	.1631	.0234	.1434	42.753	6.974	5.435	38.697	17
17	6.866	.1456	.0205	.1405	48.884	7.120 7.250	5.643	40.908	18
18	7.690	.1300	.0179	.1379	55.750 63.440	7.250	5.838	42.998	19
19	8.613	.1161	.0158	.1358	63.440 72.052	7.469	6.020	44.968	20
20	9.646	.1037	.0139	.1339	72.032	7.409	0.020	44.700	
	10.804	0036	.0122	.1322	81.699	7.562	6.191	46.819	21
21	10.804	.0926 .0826	.0122	.1322	92.503	7.645	6.351	48.554	22
22	12.100	.0738	.00956		104.603	7.718	6.501	50.178	23
23	13.552	.0659	.00930		118.155	7.784	6.641	51.693	24
24	15.179	.0588	.00750		133.334	7.843	6.771	53.105	25
25	17.000	.0300	.00750						
26	19.040	.0525	.00665	.1267	150.334	7.896	6.892	54.418	26
27	21.325	.0469	.00590	.1259	169.374	7.943	7.005	55.637	27
28	23.884	.0419	.00524	.1252	190.699	7.984	7.110	56.767	28
29	26.750	.0374	.00466		214.583	8.022	7.207	57.814	29 30
30	29.960	.0334	.00414	.1241	241.333	8.055	7.297	58.782	30
			00010	1007	271 202	8.085	7.381	59.676	31
31	33.555	.0298	.00369		271.293	8.112	7.459	60.501	32
32	37.582	.0266	.00328		304.848 342.429	8.135	7.530	61.261	33
33	42.092	.0238	.00292		384.521	8.157	7.596	61.961	34
34	47.143	.0212	.00260 .00232		431.663	8.176	7.658	62.605	35
35	52.800	.0189	.00232	.1223	431.003	0.170			
40	93.051	.0107	.00130	.1213	767.091	8.244	7.899	65.116	40
40	163.988	.00610			1 358.2	8.283	8.057	66.734	45
50	289.002	.00346			2 400.0	8.304	8.160	67.762	50
55	509.321	.00196		.1202	4 236.0	8.317	8.225	68.408	55
60	897.597	.00111			7 471.6	8.324	8.266	68.810	60
			_			0.330	0 202	60.059	65
65	1 581.9	.00063			13 173.9	8.328	8.292	69.058 69.210	70
70	2 787.8	.00036			23 223.3	8.330	8.308	69.210	75
75	4 913.1	.00020			40 933.8	8.332	8.318 8.324	69.359	80
80	8 658.5	.00012		.1200	72 145.7	8.332 8.333	8.328	69.393	85
85	15 259.2	.00007	.00001	.1200	127 151.7	0.333	0.320		-
±	a (001 0	0000	1	1200	224 091.1	8.333	8.330	69.414	90
90	26 891.9	.00004		.1200		8.333	8.331	69.426	95
95	47 392.8	.00002		1200	696 010.5	8.333	8.332	69.434	100
100	83 522.3	.00001		.1200	070 010.5	0.555	U.JJ L		

	Single Pa	ment		Uniform	Payment Series		Arithmetic Gradient		
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
	Find F Given P	Find P Given F	Find A Given F	Find A	Find F Given A	Find P Given A	Find A Given G	Find P Given G	
n	F/P	P/F	A/F	A/P	F/A	P/A	A/G	P/G	n
1	1.150	.8696	1.0000	1.1500	1.000	0.870	0	0	1
2	1.322	.7561	.4651	.6151	2.150	1.626	0.465	0.756	2
3	1.521 1.749	.6575 .5718	.2880 .2003	.4380 .3503	3.472	2.283	0.907	2.071	3
5	2.011	.4972	.1483	.2983	4.993 6.742	2.855 3.352	1.326 1.723	3.786 5.775	4 5
6	2.313	.4323	.1142	.2642	8.754	3.784	2.097	7.937	6
7	2.660	.3759	.0904	.2404	11.067	4.160	2.450	10.192	7
8	3.059	.3269	.0729	.2229	13.727	4.487	2.781	12.481	8
9	3.518	.2843	.0596	.2096	16.786	4.772	3.092	14.755	9
10	4.046	.2472	.0493	.1993	20.304	5.019	3.383	16.979	10
11	4.652	.2149	.0411	.1911	24.349	5.234	3.655	19.129	11
12 13	5.350 6.153	.1869 .1625	.0345 .0291	.1845 .1791	29.002	5.421	3.908	21.185	12
14	7.076	.1023	.0291	.1747	34.352 40.505	5.583 5.724	4.144	23.135	13
15	8.137	.1229	.0210	.1710	40.505 47.580	5.724 5.847	4.362 4.565	24.972 26.693	14 15
16	9.358	.1069	.0179	.1679	55.717	5.954	4.752	28.296	16
17	10.761	.0929	.0154	.1654	65.075	6.047	4.925	29.783	17
18	12.375	.0808	.0132	.1632	75.836	6.128	5.084	31.156	18
19	14.232	.0703	.0113	.1613	88.212	6.198	5.231	32.421	19
20	16.367	.0611	.00976	.1598	102.444	6.259	5.365	33.582	20
21	18.822	.0531	.00842	.1584	118.810	6.312	5.488	34.645	21
22 23	21.645 24.891	.0462 .0402	.00727 .00628	.1573 .1563	137.632	6.359	5.601	35.615	22
24	28.625	.0349	.00543	.1554	159.276 184.168	6.399 6.434	5.704 5.798	36.499 37.302	23 24
25	32.919	.0304	.00470	.1547	212.793	6.464	5.883	38.031	25
26	37.857	.0264	.00407	.1541	245.712	6.491	5.961	38.692	26
27	43.535	.0230	.00353	.1535	283.569	6.514	6.032	39.289	27
28	50.066	0200	.00306	.1531	327.104	6.534	6.096	39.828	28
29 30	57.575 66.212	.0174 .0151	.00265 .00230	.1527 .1523	377.170 434.745	6.551 6.566	6.154 6.207	40.315 40.753	29 30
31	76.144	.0131	.00200	.1520	500.957	6.579	6.254	41.147	31
32	87.565	.0114	.00173	.1517	577.100	6.591	6.297	41.501	32
33	100.700	.00993	.00150	.1515	664.666	6.600	6.336	41.818	33
34	115.805	.00864	.00131	.1513	765.365	6.609	6.371	42.103	34
35	133.176	.00751	.00113	.1511	881.170	6.617	6.402	42.359	35
40	267.864	.00373	.00056	.1506	1 779.1	6.642	6.517	43.283	40
45 50	538.769 1 083.7	.00186	.00028	.1503	3 585.1	6.654	6.583	43.805	45
55	1 083.7 2 179.6	.00092 .00046	.00014 .00007	.1501 .1501	7 217.7	6.661	6.620	44.096	50
60	4 384.0	.00023	.00007	.1500	14 524.1 29 220.0	6.664 6.665	6.641 6.653	44.256 44.343	55 60
65	8 817.8	.00011	.00002	.1500	58 778.6	6.666	6.659	44.390	65
70	17 735.7	.00006	.00001	.1500	118 231.5	6.666	6.663	44.416	70
75	35 672.9	.00003		.1500	237 812.5	6.666	6.665	44.429	75
80 85	71 750.9	.00001		.1500	478 332.6	6.667	6.666	44.436	80
	144 316.7	.00001		.1500	962 104.4	6.667	6.666	44.440	85

Compound Amount Fund Fund Fund Fund Fund Factor F		Single Pay	ment	Uniform Payment Series				Arithmeti	c Gradient	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Amount	Worth	Fund	Recovery	y Amount	Worth	Uniform	Present	
2 1.440 6944 .4545 6545 2.200 1.528 0.455 0.694 2 3 1.728 .5787 .2747 .4747 3.640 2.106 0.879 1.852 3 4 2.074 .4823 .1863 .3863 5.368 2.589 1.274 3.299 4 5 2.488 .4019 .1344 .3344 7.442 2.991 1.641 4.906 5 6 2.986 .3349 .1007 .3007 9.930 3.326 1.979 6.581 6 7 3.583 .2791 .0774 .2774 12.916 3.605 2.290 8.255 7 8 4.300 .2326 .0606 .2606 16.499 3.837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.366 11.444 14.44 14.44 14.44 13.44 12.899 1.122	n	Given P	Given F	Given F	Given P	Given A	Given A	Given G	Given G	n
5 2.488 .4019 .1344 .3344 7.442 2.991 1.641 4.906 5 6 2.986 .3349 .1007 .3007 9.930 3.326 1.979 6.581 6 7 3.583 .2791 .0774 .2774 12.916 3.605 2.290 8.255 7 8 4.300 .2326 .0660 .2606 16.499 .3837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 .8.916 .1122 .0253 .2253 39.581 4.439 3.44 15.467 12 13 10.699 .0935 .0266	1					1.000				1
5 2.488 .4019 .1344 .3344 7.442 2.991 1.641 4.906 5 6 2.986 .3349 .1007 .3007 9.930 3.326 1.979 6.581 6 7 3.583 .2791 .0774 .2774 12.916 3.605 2.290 8.255 7 8 4.300 .2326 .0660 .2606 16.499 .3837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 .8.916 .1122 .0253 .2253 39.581 4.439 3.44 15.467 12 13 10.699 .0935 .0266	2	1.440	.6944							3
5 2.488 .4019 .1344 .3344 7.442 2.991 1.641 4.906 5 6 2.986 .3349 .1007 .3007 9.930 3.326 1.979 6.581 6 7 3.583 .2791 .0774 .2774 12.916 3.605 2.290 8.255 7 8 4.300 .2326 .0660 .2606 16.499 .3837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 .8.916 .1122 .0253 .2253 39.581 4.439 3.44 15.467 12 13 10.699 .0935 .0266	3									4
6 2.986 .3349 .1007 .3007 9.930 3.326 1.979 6.581 6 7 3.583 .2791 .0774 .2774 12.916 3.605 2.290 8.255 7 8 4.300 .2326 .0606 .2606 16.499 3.837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 8.916 .1122 .0253 .2253 39.581 4.439 3.484 15.467 12 13 10.699 .0935 .0206 .2206 48.497 4.533 3.660 16.588 13 14 12.839 .0779 .0169 .2169 59.196 4.611 3.817 17.601 14 15 15.407 .0649 .0139 .2139 72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 22.186 .0451 .00944 .2094 .105.931 4.775 4.198 20.042 17 18 26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 38.338 .0261 .00369 .2037 .271.031 4.999 4.594 22.555 22 23 66.247 .0151 .00307 .2031 .326.237 4.925 4.647 22.887 23 24.279 .0126 .00255 .2025 .392.484 4.937 4.945 4.694 23.176 24 25 .926 4.891 4.533 .22.174 21 22 .55.006 .0181 .00369 .2037 .271.031 4.999 4.594 .22.555 22 .23 66.247 .0151 .00307 .2031 .326.237 4.925 4.647 .22.887 .23 176 .24 25 .95.396 .0105 .00212 .2021 471.981 4.948 4.735 .23.428 25 .00235 .0068 .0105 .00212 .2021 471.981 4.948 4.735 .23.428 .25 26 114.475 .00874 .00176 .2018 .567.377 4.956 4.771 .23.646 .26 27 .137.371 .00728 .00147 .2015 .681.853 4.964 4.802 .23.835 .27 .28 164.845 .00607 .00122 .2012 .819.223 4.970 4.829 .23.835 .27 .28 164.845 .00607 .00122 .2012 .819.23 4.970 4.829 .23.835 .27 .28 164.845 .00607 .00122 .2012 .819.23 4.990 4.891 .24.537 .33 .44.822 .00293 .00059 .2006 .1704.1 4.985 4.990 4.891 .24.537 .33 .41.812 .00203 .00059 .2006 .1704.1 4.985 4.990 4.891 .24.661 .35 .2006 .2006 .2006 .2006 .2006 .2006 .2007 .2008 .2008 .2008 .2008 .2008	4									5
7 3.383 2791 0774 2774 12.916 3.605 2.290 8.255 7 8 4.300 2.326 0606 2606 16.499 3.837 2.576 9.883 8 9 5.160 1.938 0.481 2.481 20.799 4.031 2.836 11.434 9 10 6.192 1.615 0.385 2.385 25.999 4.192 3.074 12.887 10 11 7.430 1.346 0.311 2.311 32.150 4.327 3.289 14.233 11 12 8.916 1.122 0.253 2.253 39.581 4.439 3.484 15.467 12 13 10.699 0.9935 0.206 2.206 48.497 4.533 3.660 16.588 13 14 12.839 0.779 0.169 2.169 59.196 4.611 3.817 17.601 14 15 15.407 0.649 0.0139 2.139 72.035 4.675 3.959 18.509 15 16 18.488 0.541 0.0114 2.114 87.442 4.730 4.085 19.321 16 17 22.186 0.451 0.0944 2.094 105.931 4.775 4.198 20.042 17 18 26.623 0.376 0.0781 2.078 128.117 4.812 4.298 20.680 18 19 31.948 0.313 0.0646 2.065 154.740 4.843 4.386 21.244 19 20 38.338 0.261 0.0536 2.054 186.688 4.870 4.464 21.739 20 21 46.005 0.217 0.0444 2.044 2.25.026 4.891 4.533 22.174 21 22 55.206 0.181 0.0369 2.037 271.031 4.909 4.594 22.555 22 23 66.247 0.151 0.00369 2.037 271.031 4.909 4.594 22.555 22 23 66.247 0.151 0.00369 2.037 271.031 4.909 4.594 22.555 22 23 66.247 0.151 0.00367 2.0054 186.688 4.870 4.464 21.739 20 21 46.005 0.217 0.0444 2.044	5	2.466	.4019	.1344	.5544	1.772	2.771	1.041	1.700	•
7 3.583 2791 0774 2774 12.916 3.605 2.290 8.255 7 8 4.300 2.326 0.606 2.606 16.499 3.837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 31 10.699 .09935 .0206 .2206 48.497 4.533 3.484 15.467 12 13 10.699 .09935 .0206 .2206 48.497 4.533 3.660 16.588 13 14 12.839 .0779 .0169 .2199 59.196 4.611 3.817 17.601 14 15 16 18.488 .0541 .0	6	2.986	.3349	.1007	.3007	9.930	3.326	1.979		6
8 4,300 2326 .0606 2606 16.499 3.837 2.576 9.883 8 9 5.160 .1938 .0481 .2481 20.799 4.031 2.836 11.434 9 10 6.192 .1615 .0385 .2385 .25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 8.916 .1122 .0253 .2253 .39.581 4.439 3.484 15.467 12 13 10.699 .0935 .0206 .2206 48.497 4.533 3.660 16.588 13 14 12.839 .0779 .0169 .2139 .72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 22.186 .0451 <	7		.2791					2.290		7
9 5.160 1938 0481 2481 20.799 4.031 2.836 11.434 9 10 6.192 1615 0.385 2385 25.959 4.192 3.074 12.887 10 11 7.430 1.346 0.311 2.311 32.150 4.327 3.289 14.233 11 12 8.916 1.1122 0.253 2.253 39.581 4.439 3.484 15.467 12 13 10.699 0.935 0.206 2206 48.497 4.533 3.660 16.588 13 14 12.839 0.779 0.169 2.169 59.196 4.611 3.817 17.601 14 15 15.407 0.649 0.139 2.139 72.035 4.675 3.959 18.509 15 16 18.488 0.541 0.114 2.114 87.442 4.730 4.085 19.321 16 17 22.186 0.451 0.0944 2.094 105.931 4.775 4.198 20.042 17 18 26.623 0.376 0.0781 2.078 128.117 4.812 4.298 20.680 18 19 31.948 0.313 0.0646 2.065 154.740 4.843 4.386 21.244 19 20 38.338 0.0261 0.0536 2.054 186.688 4.870 4.464 21.739 20 21 46.005 0.217 0.0444 2.044	8		.2326	.0606						8
10 6.192 .1615 .0385 .2385 25.959 4.192 3.074 12.887 10 11 7.430 .1346 .0311 .2311 32.150 4.327 3.289 14.233 11 12 8.916 .1122 .0253 .2253 39.581 4.439 .3484 15.467 13 10.699 .0935 .0206 .2206 48.497 4.533 3.660 16.588 13 14 12.839 .0779 .0169 .2169 59.196 4.611 3.817 17.601 14 15 .15.407 .0649 .0139 .2139 72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 .22.186 .0451 .00781 .2094 .105.931 4.775 4.198 20.042 17 18 .26.623 .0376 .0078		5.160								
12 8.916	10	6.192	.1615	.0385	.2385	25.959	4.192	3.074	12.887	10
12 8.916		7 430	1246	0311	2311	32 150	4 327	3 289	14.233	11
13 10.699 .0935 .0206 .2206 48.497 4.533 3.660 16.588 13 14 12.839 .0779 .0169 .2139 .72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 .87.442 4.730 .4.085 19.321 16 17 .22.186 .0451 .00944 .2094 105.931 4.775 4.198 20.042 17 18 .26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 .31.948 .0313 .00646 .2065 .154.740 4.843 4.386 21.244 19 20 .38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 .46.005 .0217 .00444 .2044 .225.026 4.891 4.533 22.174 21 22 .55.206	11			0253	2253					
14 12.839 .0779 .0169 .2169 59.196 4.611 3.817 17.601 14 15 15.407 .0649 .0139 .2139 .72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 .22.186 .0451 .00944 .2094 .105.931 4.775 4.198 20.042 17 18 .26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 .154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .52.206	12		0935		2206					
15 15.407 .0649 .0139 .2139 .72.035 4.675 3.959 18.509 15 16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 .22.186 .0451 .00944 .2094 105.931 4.775 4.198 20.042 17 18 .26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .52.06 .0181 .00369 .2037 .271.031 4.909 4.594 22.555 22 23 23 <										
16 18.488 .0541 .0114 .2114 87.442 4.730 4.085 19.321 16 17 22.186 .0451 .00944 .2094 105.931 4.775 4.198 20.042 17 18 26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .52.066 .0181 .00369 .2037 .271.031 4.909 4.594 22.555 22 23 .66.247 .0151 .00307 .2031 .326.237 4.925 4.647 .22.887 23 24 .79.497	15								18.509	15
17 22.186 .0451 .00944 .2094 .105.931 4.775 4.198 20.042 17 18 26.623 .0376 .00781 .2078 .128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 .154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .55.206 .0181 .00369 .2037 .271.031 4.909 4.594 22.555 22 23 .66.247 .0151 .00307 .2031 .326.237 4.925 4.647 22.887 23 24 .79.497 .0126 .00255 .2025 .392.484 4.937 4.694 23.176 24 25 95.396 .01										
18 26.623 .0376 .00781 .2078 128.117 4.812 4.298 20.680 18 19 31.948 .0313 .00646 .2065 .154.740 4.843 4.386 21.244 19 20 .38.338 .0261 .00536 .2054 .186.688 4.870 4.464 21.739 20 21 .46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .55.206 .0181 .00369 .2037 .271.031 4.909 4.594 22.555 22 23 .66.247 .0151 .00307 .2031 .362.237 .4925 .4.647 .22.887 23 24 .79.497 .0126 .00255 .2025 .392.484 4.937 4.694 23.176 24 25 .95.396 .0105 .00212 .2021 .471.981 4.948 4.735 23.428 25 26 .11	16									
19 31.948 .0313 .00646 .2065 154.740 4.843 4.386 21.244 19 20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 21 22 .55.206 .0181 .00369 .2037 .271.031 4.909 4.594 .22.555 .22 23 .66.247 .0151 .00307 .2031 .326.237 4.925 4.647 .22.887 .23 24 .79.497 .0126 .00255 .2025 .392.484 4.937 4.694 23.176 .24 25 .95.396 .0105 .00212 .2021 .471.981 4.948 4.735 23.428 25 26 .114.475 .00874 .00176 .2018 .567.377 4.956 4.771 23.646 26 27 .137.371 .00728 .00147 .2015 .681.853 4.964 4.802 <td< th=""><th>17</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	17									
20 38.338 .0261 .00536 .2054 186.688 4.870 4.464 21.739 20 21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 .21 22 .55.206 .0181 .00369 .2037 .271.031 4.909 4.594 .22.555 .22 23 .66.247 .0151 .00307 .2031 .326.237 4.925 4.647 .22.887 .23 24 .79.497 .0126 .00255 .2025 .392.484 4.937 .4.694 .23.176 .24 25 .95.396 .0105 .00212 .2021 .471.981 4.948 4.735 23.428 .25 26 .114.475 .00874 .00176 .2018 .567.377 4.956 4.771 .23.646 .26 27 .137.371 .00728 .00147 .2015 .681.853 4.964 4.802 23.835 .27 28										
21 46.005 .0217 .00444 .2044 .225.026 4.891 4.533 .22.174 .21 22 .55.206 .0181 .00369 .2037 .271.031 4.909 4.594 .22.555 .22 23 .66.247 .0151 .00307 .2031 .326.237 4.925 4.647 .22.887 .23 24 .79.497 .0126 .00255 .2025 .392.484 4.937 4.694 .23.176 .24 25 .95.396 .0105 .00212 .2021 .471.981 4.948 4.735 23.428 .25 26 .114.475 .00874 .00176 .2018 .567.377 4.956 4.771 .23.646 .26 27 .137.371 .00728 .00147 .2015 .681.853 4.964 4.802 23.835 27 28 .164.845 .00607 .00122 .2012 .819.223 4.970 4.829 23.999 28 29 .197.814 .00566 .00102 .2010 .984.068 4.975 4.853 </td <th>19</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	19									
22 55.206 .0181 .00369 .2037 271.031 4.909 4.594 22.555 22 23 66.247 .0151 .00307 .2031 326.237 4.925 4.647 22.887 23 24 79.497 .0126 .00255 .2025 392.484 4.937 4.694 23.176 24 25 95.396 .0105 .00212 .2021 471.981 4.948 4.735 23.428 25 26 114.475 .00874 .00176 .2018 .567.377 4.956 4.771 23.646 26 27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 <th>20</th> <td>38.338</td> <td>.0261</td> <td>.00536</td> <td>.2054</td> <td>180.088</td> <td>4.670</td> <td>4.404</td> <td>21.739</td> <td>20</td>	20	38.338	.0261	.00536	.2054	180.088	4.670	4.404	21.739	20
22 55.206 .0181 .00369 .2037 271.031 4.909 4.594 22.555 22 23 66.247 .0151 .00307 .2031 326.237 4.925 4.647 22.887 23 24 79.497 .0126 .00255 .2025 392.484 4.937 4.694 23.176 24 25 95.396 .0105 .00212 .2021 471.981 4.948 4.735 23.428 25 26 114.475 .00874 .00176 .2018 .567.377 4.956 4.771 23.646 26 27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 <th>21</th> <th>46.005</th> <th>.0217</th> <th>.00444</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>21</th>	21	46.005	.0217	.00444						21
23 66.247 .0151 .00307 .2031 326.237 4.925 4.647 22.887 23 24 79.497 .0126 .00255 .2025 392.484 4.937 4.694 23.176 24 25 95.396 .0105 .00212 .2021 471.981 4.948 4.735 23.428 25 26 114.475 .00874 .00176 .2018 567.377 4.956 4.771 23.646 26 27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 <th>22</th> <th></th> <th></th> <th>.00369</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	22			.00369						
25 95.396 .0105 .00212 .2021 471.981 4.948 4.735 23.428 25 26 114.475 .00874 .00176 .2018 .567.377 4.956 4.771 23.646 .26 27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410	23		.0151							
26 114.475 .00874 .00176 .2018 567.377 4.956 4.771 23.646 26 27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.6	24									
27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590	25	95.396	.0105	.00212	.2021	471.981	4.948	4.735	23.428	25
27 137.371 .00728 .00147 .2015 681.853 4.964 4.802 23.835 27 28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590	26	114 475	00874	00176	2018	567.377	4.956	4.771	23.646	26
28 164.845 .00607 .00122 .2012 819.223 4.970 4.829 23.999 28 29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .0068 .00014 .2001 7 343.9 4.997 4.973 24.84	27									27
29 197.814 .00506 .00102 .2010 984.068 4.975 4.853 24.141 29 30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.	28				.2012	819.223	4.970	4.829	23.999	28
30 237.376 .00421 .00085 .2008 1 181.9 4.979 4.873 24.263 30 31 284.852 .00351 .00070 .2007 1 419.3 4.982 4.891 24.368 31 32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24	29					984.068				29
32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24,970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55	30	237.376	.00421	.00085	.2008	1 181.9	4.979	4.873	24.263	30
32 341.822 .00293 .00059 .2006 1 704.1 4.985 4.906 24.459 32 33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24,970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55	21	284 852	00351	00070	2007	1 419 3	4 982	4.891	24.368	31
33 410.186 .00244 .00049 .2005 2 045.9 4.988 4.919 24.537 33 34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24,970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55									24.459	
34 492.224 .00203 .00041 .2004 2 456.1 4.990 4.931 24.604 34 35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24.970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55										
35 590.668 .00169 .00034 .2003 2 948.3 4.992 4.941 24.661 35 40 1 469.8 .00068 .00014 .2001 7 343.9 4.997 4.973 24.847 40 45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24.970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55					.2004			4.931	24.604	
45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24,970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55							4.992	4.941	24.661	35
45 3 657.3 .00027 .00005 .2001 18 281.3 4.999 4.988 24.932 45 50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24,970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55	40	1 460 0	00040	00014	2001	7 343 0	4 997	4 073	24 847	40
50 9 100.4 .00011 .00002 .2000 45 497.2 4.999 4.995 24.970 50 55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55										
55 22 644.8 .00004 .00001 .2000 113 219.0 5.000 4.998 24.987 55										
7000										

	Single Pa	yment		Uniform	Payment Series	i	Arithmeti	c Gradient	
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
n	Find F Given P F/P	Find P Given F P/F	Find A Given F A/F	Find A Given P A/P	Find F Given A F/A	Find P Given A P/A	Find A Given G A/G	Find P Given G P/G	n
1	1.300	.7692	1.0000	1.3000	1.000	0.769	0	0	1
2	1.690	.5917	.4348	.7348	2.300	1.361	0.435	0.592	2
3	2.197	.4552	.2506	.5506	3.990	1.816	0.827	1.502	3
4	2.856	.3501	.1616	.4616	6.187	2.166	1.178	2.552	4
5	3.713	.2693	.1106	.4106	9.043	2.436	1.490	3.630	5
6	4.827	.2072	.0784	.3784	12.756	2.643	1.765	4.666	6
7	6.275	.1594	.0569	.3569	17.583	2.802	2.006	5.622	7
8	8.157	.1226	.0419	.3419	23.858	2.925	2.216	6.480	8
9	10.604	.0943	.0312	.3312	32.015	3.019	2.396	7.234	9
10	13.786	.0725	.0235	.3235	42.619	3.092	2.551	7.887	10
11	17.922	.0558	.0177	.3177	56.405	3.147	2.683	8.445	11
12	23.298	.0429	.0135	.3135	74.327	3.190	2.795	8.917	12
13	30.287	.0330	.0102	.3102	97.625	3.223	2.889	9.314	13
14	39.374	.0254	.00782	.3078	127.912	3.249	2.969	9.644	14
15	51.186	.0195	.00598	.3060	167.286	3.268	3.034	9.917	15
16	66.542	.0150	.00458	.3046	218.472	3.283	3.089	10.143	16
17	86.504	.0116	.00351	.3035	285.014	3.295	3.135	10.328	17
18	112.455	.00889	.00269	.3027	371.518	3.304	3.172	10.479	18
19	146.192	.00684	.00207	.3021	483.973	3.311	3.202	10.602	19
20	190.049	.00526	.00159	.3016	630.165	3.316	3.228	10.702	20
21	247.064	.00405	.00122	.3012	820.214	3.320	3.248	10.783	21
22	321.184	.00311	.00094	.3009	1 067.3	3.323	3.265	10.848	22
23	417.539	.00239	.00072	.3007	1 388.5	3.325	3.278	10.901	23
24	542.800	.00184	.00055	.3006	1 806.0	3.327	3.289	10.943	24
25	705.640	.00142	.00043	.3004	2 348.8	3.329	3.298	10.977	25
26 27 28 29 30	917.332 1 192.5 1 550.3 2 015.4 2 620.0	.00109 .00084 .00065 .00050 .00038	.00033 .00025 .00019 .00015	.3003 .3003 .3002 .3001 .3001	3 054.4 3 971.8 5 164.3 6 714.6 8 730.0	3.330 3.331 3.331 3.332 3.332	3.305 3.311 3.315 3.319 3.322	11.005 11.026 11.044 11.058 11.069	26 27 28 29 30
31	3 406.0	.00029	.00009	.3001	11 350.0	3.332	3.324	11.078	31
32	4 427.8	.00023	.00007	.3001	14 756.0	3.333	3.326	11.085	32
33	5 756.1	.00017	.00005	.3001	19 183.7	3.333	3.328	11.090	33
34	7 483.0	.00013	.00004	.3000	24 939.9	3.333	3.329	11.094	34
35	9 727.8	.00010	.00003	.3000	32 422.8	3.333	3.330	11.098	35
40	36 118.8	.00003	.00001	.3000	120 392.6	3.333	3.332	11.107	40
45	134 106.5	.00001		.3000	447 018.3	3.333	3.333	11.110	45

	Single Pay	ment		Uniform P	ayment Series	;	Arithmeti	c Gradient	
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
n	Find F Given P F/P	Find P Given F P/F	Find A Given F A/F	Find A Given P A/P	Find F Given A F/A	Find P Given A P/A	Find A Given G A/G	Find P Given G P/G	n
1	1.400	.7143	1.0000	1.4000	1.000	0.714	0	0	1
2	1.960	.5102	.4167	.8167	2.400	1.224	0.417	0.510	2
3	2.744	.3644	.2294	.6294	4.360	1.589	0.780	1.239	3
4	3.842	.2603	.1408	.5408	7.104	1.849	1.092	2.020	4
5	5.378	.1859	.0914	.4914	10.946	2.035	1.358	2.764	5
6	7.530	.1328	.0613	.4613	16.324	2.168	1.581	3.428	6
7	10.541	.0949	.0419	.4419	23.853	2.263	1.766	3.997	7
8	14.758	.0678	.0291	.4291	34.395	2.331	1.919	4.471	8
9	20.661	.0484	.0203	.4203	49.153	2.379	2.042	4.858	9
10	28.925	.0346	.0143	.4143	69.814	2.414	2.142	5.170	10
11	40.496	.0247	.0101	.4101	98.739	2.438	2.221	5.417	11
12	56.694	.0176	.00718	.4072	139.235	2.456	2.285	5.611	12
13	79.371	.0126	.00510	.4051	195.929	2.469	2.334	5.762	13
14	111.120	.00900	.00363	.4036	275.300	2.478	2.373	5.879	14
15	155.568	.00643	.00259	.4026	386.420	2.484	2.403	5.969	15
16	217.795	.00459	.00185	.4018	541.988	2.489	2.426	6.038	16
17	304.913	.00328	.00132	.4013	759.783	2.492	2.444	6.090	17
18	426.879	.00234	.00094	.4009	1 064.7	2.494	2.458	6.130	18
19	597.630	.00167	.00067	.4007	1 419.6	2.496	2.468	6.160	19
20	836.682	.00120	.00048	.4005	2 089.2	2.497	2.476	6.183	20
21 22 23 24 25	1 171.4 1 639.9 2 295.9 3 214.2 4 499.9	.00085 .00061 .00044 .00031	.00034 .00024 .00017 .00012 .00009	.4003 .4002 .4002 .4001 .4001	2 925.9 4 097.2 5 737.1 8 033.0 11 247.2	2.498 2.498 2.499 2.499 2.499	2.482 2.487 2.490 2.493 2.494	6.200 6.213 6.222 6.229 6.235	21 22 23 24 25
26	6 299.8	.00016	.00006	.4001	15 747.1	2.500	2.496	6.239	26
27	8 819.8	.00011	.00005	.4000	22 046.9	2.500	2.497	6.242	27
28	12 347.7	.00008	.00003	.4000	30 866.7	2.500	2.498	6.244	28
29	17 286.7	.00006	.00002	.4000	43 214.3	2.500	2.498	6.245	29
30	24 201.4	.00004	.00002	.4000	60 501.0	2.500	2.499	6.247	30
31 32 33 34 35	33 882.0 47 434.8 66 408.7 92 972.1 130 161.0	.00003 .00002 .00002 .00001 .00001	.00001 .00001 .00001	.4000 .4000 .4000 .4000 .4000	84 702.5 118 584.4 166 019.2 232 427.9 325 400.0	2.500 2.500 2.500 2.500 2.500	2.499 2.499 2.500 2.500 2.500	6.248 6.248 6.249 6.249 6.249	31 32 33 34 35

	Single Pa	yment		Uniform !	Payment Series	5	Arithmeti	c Gradient	
	Compound Amount Factor	Present Worth Factor	Sinking Fund Factor	Capital Recovery Factor	Compound Amount Factor	Present Worth Factor	Gradient Uniform Series	Gradient Present Worth	
п	Find F Given P F/P	Find P Given F P/F	Find A Given F A/F	Find A Given P A/P	Find F Given A F/A	Find P Given A P/A	Find A Given G A/G	Find P Given G P/G	n
1 2 3	1.500 2.250 3.375	.6667 .4444 .2963	1.0000 .4000 .2105	1.5000 .9000 .7105 .6231	1.000 2.500 4.750 8.125	0.667 1.111 1.407 1.605	0 0.400 0.737 1.015	0 0.444 1.037 1.630	1 2 3 4 5
4 5	5.063 7.594	.1975 .1317	.1231 .0758	.5758	13.188	1.737	1.242	2.156	5
6 7 8 9 10	11.391 17.086 25.629 38.443 57.665	.0878 .0585 .0390 .0260 .0173	.0481 .0311 .0203 .0134 .00882	.5481 .5311 .5203 .5134 .5088	20.781 32.172 49.258 74.887 113.330	1.824 1.883 1.922 1.948 1.965	1.423 1.565 1.675 1.760 1.824	2.595 2.947 3.220 3.428 3.584	6 7 8 9 10
11 12 13 14 15	86.498 129.746 194.620 291.929 437.894	.0116 .00771 .00514 .00343 .00228	.00585 .00388 .00258 .00172 .00114	.5058 .5039 .5026 .5017 .5011	170.995 257.493 387.239 581.859 873.788	1.977 1.985 1.990 1.993 1.995	1.871 1.907 1.933 1.952 1.966	3.699 3.784 3.846 3.890 3.922	11 12 13 14 15
16 17 18 19 20	656.841 985.261 1 477.9 2 216.8 3 325.3	.00152 .00101 .00068 .00045 .00030	.00076 .00051 .00034 .00023 .00015	.5008 .5005 .5003 .5002 .5002	1 311.7 1 968.5 2 953.8 4 431.7 6 648.5	1.997 1.998 1.999 1.999	1.976 1.983 1.988 1.991 1.994	3.945 3.961 3.973 3.981 3.987	16 17 18 19 20
21 22 23 24 25	4 987.9 7 481.8 11 222.7 16 834.1 25 251.2	.00020 .00013 .00009 .00006 .00004	.00010 .00007 .00004 .00003 .00002	.5001 .5001 .5000 .5000 .5000	9 973.8 14 961.7 22 443.5 33 666.2 50 500.3	2.000 2.000 2.000 2.000 2.000	1.996 1.997 1.998 1.999 1.999	3.991 3.994 3.996 3.997 3.998	21 22 23 24 25
26 27 28 29 30	37 876.8 56 815.1 85 222.7 127 834.0 191 751.1	.00003 .00002 .00001 .00001	.00001 .00001 .00001	.5000 .5000 .5000 .5000	75 751.5 113 628.3 170 443.4 255 666.1 383 500.1	2.000 2.000 2.000 2.000 2.000	1.999 2.000 2.000 2.000 2.000	3.999 3.999 3.999 4.000 4.000	26 27 28 29 30
31 32	287 626.6 431 439.9			.5000 .5000	575 251.2 862 877.8	2.000 2.000	2.000 2.000	4.000 4.000	31 32

Economic Criteria

Method of Analysis	Fixed Input	Fixed Output	Neither Input Nor Output Fixed
PRESENT WORTH	Maximize PW of Benefits	Minimize PW of Costs	Maximize (PW of Benefits - PW of Costs), or Maximize Net Present Worth
ANNUAL CASH FLOW	Maximize Equivalent Uniform Annual Benefits (EUAB)	Minimize Equivalent Uniform Annual Cost (EUAC)	Maximize (EUAB - EUAC)
FUTURE WORTH	Maximize FW of Benefits	Minimize FW of Costs	Maximize (FW of Benefits - FW of Costs), or Maximize Net Future Worth
BENEFIT-COST RATIO	Maximize Benefit–Cost Ratio	Maximize Benefit-Cost Ratio	Two Alternatives: Compute the incremental Benefit-Cost ratio (ΔB/ΔC) on the increment of investment between the alternatives. If ΔB/ΔC ≥ 1, choose higher-cost alternative; if not, choose lower-cost alternative. Three or more Alternatives: Incremental analysis is required (see Ch. 9).
RATE OF RETURN	investment between	the alternatives. If Δ	rate of return (∆ROR) on the increment of ROR ≥ minimum attractive rate of return, choose lower-cost alternative.

Three or more Alternatives: Incremental analysis is required (see Ch. 8).