## Appendix A: Discrete Compounding Tables

This appendix contains tables for the following factors:

Single Payment Present Worth:  $(P|F, i, m) = (1+i)^{-m}$ 

Single Payment Compound Amount:  $(F|P, i, m) = (1+i)^m$ 

Uniform Series Present Worth:  $(P|A, i, m) = [1 - (1+i)^{-m}]/i$ 

Uniform Series Capital Recovery:  $(A | P, i, m) = i/[1 - (1+i)^{-m}]$ 

Uniform Series Compound Amount:  $(F|A, i, m) = [(1+i)^m - 1]/i$ 

Uniform Series Sinking Fund:  $(A | F, i, m) = i / [(1+i)^m - 1]$ 

Arithmetic Gradient Present Worth:  $(P|G, i, m) = \frac{[(1+i)^m - im - 1]}{[i^2(1+i)^m]}$ 

Arithmetic Gradient Uniform Series:  $(A \mid G, i, m) = 1/i - m/[(1+i)^m - 1]$ 

The following interest rates are in the tables:

1/4%	1/3%	5/12%	1/2%	7/12%	2/3%
3/4%	5/6%	11/12%	1%	1 1/12%	1 1/6%
1 1/4%	1 1/2%	1 3/4%	2%	2 1/4%	2 1/2%
2 3/4%	3%	4%	5%	6%	7%
8%	9%	10%	11%	12%	15%
18%	20%	25%	30%	40%	50%

The values of the factors are based on double precision arithmetic. The tables are formatted so there are at least four significant digits. Numbers less than 1 are accurate to four decimal places, such as .1234. Numbers equal to 1 or more can have up to four decimal digits as long as the total number of digits is six or less, such as 1.2345, 12.3456, 123.456, 1234.56, etc. Extremely small and large values are formatted using scientific notation with four significant digits, so .1234-7 equals  $0.1234 \times 10^{-7}$  and 1234+7 equals  $1234 \times 10^{-7}$ . Last digits of all numbers are rounded rather than truncated. Care has been taken to insure accuracy, but mistakes are always possible. Check values with a calculator before making any decisions of consequence.

The following factors are *not* in this appendix:

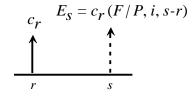
Continuous Single Payment Present Worth:  $(P|F, r, m) = e^{-rm}$ 

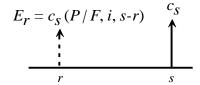
Continuous Single Payment Compound Amount:  $(F|P, r, m) = e^{rm}$ 

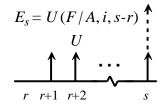
Uniform Funds Flow at funds flow rate K from time a to time b at nominal rate r:

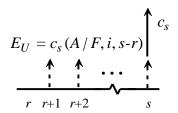
$$E_b = K \frac{e^{r(b-a)} - 1}{r}$$

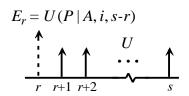
Geometric Series Present Worth:  $(P|A, g, i, m) = [1 - (1+g)^m (1+i)^{-m}] / [i-g] \}$ ,  $i \neq g$ = $A m (1+i)^{-1}$ , i = g How to Compute Last Parameters and Place Equivalents

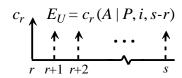












$$E_{r} = c_{r+1}(P|A, g, i, s-r) \qquad c_{r+1}(1+g)^{s-r-1}$$

$$c_{r+1} c_{r+1}(1+g) c_{r+1}(1+g)^{2}$$

$$r \qquad r+1 \qquad r+2 \qquad r+3 \qquad s$$

$$\underbrace{G \stackrel{2G}{\longrightarrow} \stackrel{(s-r-1)G}{\longrightarrow}}_{r \quad r+1 \quad r+2 \quad r+3} = \underbrace{E_U = G(A \mid G, i, s-r)}_{r \quad r+1 \quad r+2 \quad r+3} = \underbrace{\frac{G}{\longrightarrow} \stackrel{1}{\longrightarrow} \stackrel{1$$

1/4%	S	ingle		Se	eries	Arith Grad			/4%
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9975 .9950 .9925 .9901 .9876	1.0025 1.0050 1.0075 1.0100 1.0126	.9975 1.9925 2.9851 3.9751 4.9627	1.0025 .5019 .3350 .2516 .2015	1.0000 2.0025 3.0075 4.0150 5.0251	1.0000 .4994 .3325 .2491 .1990	.9950 2.9801 5.9503 9.9007	.4994 .9983 1.4969 1.9950	1 2 3 4 5
6	.9851	1.0151	5.9478	.1681	6.0376	.1656	14.8263	2.4927	6
7	.9827	1.0176	6.9305	.1443	7.0527	.1418	20.7223	2.9900	7
8	.9802	1.0202	7.9107	.1264	8.0704	.1239	27.5839	3.4869	8
9	.9778	1.0227	8.8885	.1125	9.0905	.1100	35.4061	3.9834	9
10	.9753	1.0253	9.8639	.1014	10.1133	.09888	44.1842	4.4794	10
11	.9729	1.0278	10.8368	.09228	11.1385	.08978	53.9133	4.9750	11
12	.9705	1.0304	11.8073	.08469	12.1664	.08219	64.5886	5.4702	12
13	.9681	1.0330	12.7753	.07828	13.1968	.07578	76.2053	5.9650	13
14	.9656	1.0356	13.7410	.07278	14.2298	.07028	88.7587	6.4594	14
15	.9632	1.0382	14.7042	.06801	15.2654	.06551	102.244	6.9534	15
16	.9608	1.0408	15.6650	.06384	16.3035	.06134	116.657	7.4469	16
17	.9584	1.0434	16.6235	.06016	17.3443	.05766	131.992	7.9401	17
18	.9561	1.0460	17.5795	.05688	18.3876	.05438	148.245	8.4328	18
19	.9537	1.0486	18.5332	.05396	19.4336	.05146	165.411	8.9251	19
20	.9513	1.0512	19.4845	.05132	20.4822	.04882	183.485	9.4170	20
21 22 23 24 25	.9489 .9466 .9442 .9418	1.0538 1.0565 1.0591 1.0618 1.0644	20.4334 21.3800 22.3241 23.2660 24.2055	.04894 .04677 .04479 .04298 .04131	21.5334 22.5872 23.6437 24.7028 25.7646	.04644 .04427 .04229 .04048 .03881	202.463 222.341 243.113 264.775 287.323	9.9085 10.3995 10.8901 11.3804 11.8702	21 22 23 24 25
26	.9371	1.0671	25.1426	.03977	26.8290	.03727	310.752	12.3596	26
27	.9348	1.0697	26.0774	.03835	27.8961	.03585	335.057	12.8485	27
28	.9325	1.0724	27.0099	.03702	28.9658	.03452	360.233	13.3371	28
29	.9301	1.0751	27.9400	.03579	30.0382	.03329	386.278	13.8252	29
30	.9278	1.0778	28.8679	.03464	31.1133	.03214	413.185	14.3130	30
36	.9140	1.0941	34.3865	.02908	37.6206	.02658	592.499	17.2306	36
42	.9004	1.1106	39.8230	.02511	44.2260	.02261	801.766	20.1332	42
48	.8871	1.1273	45.1787	.02213	50.9312	.01963	1040.06	23.0209	48
54	.8739	1.1443	50.4548	.01982	57.7376	.01732	1306.46	25.8936	54
60	.8609	1.1616	55.6524	.01797	64.6467	.01547	1600.08	28.7514	60
72	.8355	1.1969	65.8169	.01519	78.7794	.01269	2265.56	34.4221	72
84	.8108	1.2334	75.6813	.01321	93.3419	.01071	3029.76	40.0331	84
96	.7869	1.2709	85.2546	.01173	108.347	.009230	3886.28	45.5844	96
108	.7636	1.3095	94.5453	.01058	123.809	.008077	4829.01	51.0762	108
120	.7411	1.3494	103.562	.009656	139.741	.007156	5852.11	56.5084	120
180	.6380	1.5674	144.805	.006906	226.973	.004406	11987.2	82.7812	180
240	.5492	1.8208	180.311	.005546	328.302	.003046	19399.0	107.586	240
300	.4728	2.1150	210.876	.004742	446.008	.002242	27613.5	130.946	300
360	.4070	2.4568	237.189	.004216	582.737	.001716	36263.9	152.890	360
420	.3504	2.8539	259.841	.003849	741.564	.001349	45069.9	173.452	420
480	.3016	3.3151	279.342	.003580	926.060	.001080	53820.8	192.670	480
540	.2597	3.8509	296.129	.003377	1140.37	.8769-3	62361.3	210.588	540
600	.2235	4.4733	310.581	.003220	1389.32	.7198-3	70580.7	227.254	600

1/3%	S	ingle	Series			Arith Grad			/3%
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9967 .9934 .9901 .9868 .9835	1.0033 1.0067 1.0100 1.0134 1.0168	.9967 1.9900 2.9801 3.9669 4.9504	1.0033 .5025 .3356 .2521 .2020	1.0000 2.0033 3.0100 4.0200 5.0334	1.0000 .4992 .3322 .2488 .1987	.9934 2.9735 5.9338 9.8678	.4992 .9978 1.4958 1.9933	1 2 3 4 5
6	.9802	1.0202	5.9306	.1686	6.0502	.1653	14.7690	2.4903	6
7	.9770	1.0236	6.9076	.1448	7.0704	.1414	20.6308	2.9867	7
8	.9737	1.0270	7.8813	.1269	8.0940	.1235	27.4469	3.4825	8
9	.9705	1.0304	8.8518	.1130	9.1209	.1096	35.2109	3.9778	9
10	.9673	1.0338	9.8191	.1018	10.1513	.09851	43.9163	4.4725	10
11	.9641	1.0373	10.7831	.09274	11.1852	.08940	53.5569	4.9667	11
12	.9609	1.0407	11.7440	.08515	12.2225	.08182	64.1263	5.4603	12
13	.9577	1.0442	12.7017	.07873	13.2632	.07540	75.6182	5.9534	13
14	.9545	1.0477	13.6561	.07323	14.3074	.06989	88.0264	6.4459	14
15	.9513	1.0512	14.6074	.06846	15.3551	.06512	101.345	6.9379	15
16 17 18 19 20	.9481 .9450 .9419 .9387 .9356	1.0547 1.0582 1.0617 1.0653 1.0688	15.5556 16.5006 17.4424 18.3812 19.3168	.06429 .06060 .05733 .05440	16.4063 17.4610 18.5192 19.5809 20.6462	.06095 .05727 .05400 .05107 .04844	115.567 130.687 146.699 163.596 181.372	7.4293 7.9201 8.4104 8.9002 9.3894	16 17 18 19 20
21	.9325	1.0724	20.2493	.04938	21.7150	.04605	200.022	9.8780	21
22	.9294	1.0760	21.1787	.04722	22.7874	.04388	219.540	10.3661	22
23	.9263	1.0795	22.1050	.04524	23.8633	.04191	239.919	10.8536	23
24	.9232	1.0831	23.0283	.04342	24.9429	.04009	261.153	11.3406	24
25	.9202	1.0868	23.9484	.04176	26.0260	.03842	283.237	11.8270	25
26	.9171	1.0904	24.8655	.04022	27.1128	.03688	306.165	12.3128	26
27	.9141	1.0940	25.7796	.03879	28.2032	.03546	329.931	12.7981	27
28	.9110	1.0977	26.6906	.03747	29.2972	.03413	354.529	13.2829	28
29	.9080	1.1013	27.5986	.03623	30.3948	.03290	379.953	13.7671	29
30	.9050	1.1050	28.5036	.03508	31.4961	.03175	406.198	14.2507	30
36	.8871	1.1273	33.8708	.02952	38.1816	.02619	580.578	17.1410	36
42	.8696	1.1500	39.1318	.02555	45.0018	.02222	783.076	20.0113	42
48	.8524	1.1732	44.2888	.02258	51.9596	.01925	1012.51	22.8616	48
54	.8355	1.1969	49.3439	.02027	59.0577	.01693	1267.75	25.6921	54
60	.8190	1.2210	54.2991	.01842	66.2990	.01508	1547.66	28.5026	60
72	.7869	1.2707	63.9174	.01565	81.2226	.01231	2177.29	34.0640	72
84	.7561	1.3225	73.1593	.01367	96.7542	.01034	2893.16	39.5461	84
96	.7265	1.3764	82.0393	.01219	112.919	.008856	3687.58	44.9489	96
108	.6981	1.4325	90.5718	.01104	129.741	.007708	4553.28	50.2726	108
120	.6708	1.4908	98.7702	.01012	147.250	.006791	5483.47	55.5175	120
180	.5494	1.8203	135.192	.007397	246.090	.004064	10892.2	80.5685	180
240	.4499	2.2226	165.022	.006060	366.775	.002726	17111.8	103.694	240
300	.3685	2.7138	189.452	.005278	514.130	.001945	23671.5	124.947	300
360	.3018	3.3135	209.461	.004774	694.049	.001441	30244.4	144.391	360
420	.2472	4.0458	225.848	.004428	913.731	.001094	36610.9	162.104	420
480	.2024	4.9399	239.270	.004179	1181.96	.8461-3	42630.3	178.169	480
540	.1658	6.0316	250.262	.003996	1509.47	.6625-3	48219.8	192.678	540
600	.1358	7.3645	259.264	.003857	1909.36	.5237-3	53337.7	205.727	600

5/12	<b>%</b> s	Single		Se	eries		Arith (	Grad <b>5/</b> 1	12%
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9959 .9917 .9876 .9835 .9794	1.0042 1.0084 1.0126 1.0168 1.0210	.9959 1.9876 2.9752 3.9587 4.9381	1.0042 .5031 .3361 .2526 .2025	1.0000 2.0042 3.0125 4.0251 5.0418	1.0000 .4990 .3319 .2484 .1983	.9917 2.9669 5.9174 9.8351	.4990 .9972 1.4948 1.9917	1 2 3 4 5
6	.9754	1.0253	5.9135	.1691	6.0628	.1649	14.7119	2.4879	6
7	.9713	1.0295	6.8848	.1452	7.0881	.1411	20.5398	2.9834	7
8	.9673	1.0338	7.8521	.1274	8.1176	.1232	27.3108	3.4782	8
9	.9633	1.0381	8.8153	.1134	9.1515	.1093	35.0170	3.9723	9
10	.9593	1.0425	9.7746	.1023	10.1896	.09814	43.6504	4.4657	10
11	.9553	1.0468	10.7299	.09320	11.2321	.08903	53.2033	4.9584	11
12	.9513	1.0512	11.6812	.08561	12.2789	.08144	63.6679	5.4505	12
13	.9474	1.0555	12.6286	.07919	13.3300	.07502	75.0365	5.9418	13
14	.9434	1.0599	13.5721	.07368	14.3856	.06951	87.3014	6.4324	14
15	.9395	1.0644	14.5116	.06891	15.4455	.06474	100.455	6.9224	15
16	.9356	1.0688	15.4472	.06474	16.5099	.06057	114.489	7.4116	16
17	.9318	1.0732	16.3790	.06105	17.5786	.05689	129.397	7.9002	17
18	.9279	1.0777	17.3069	.05778	18.6519	.05361	145.172	8.3881	18
19	.9240	1.0822	18.2309	.05485	19.7296	.05069	161.804	8.8753	19
20	.9202	1.0867	19.1511	.05222	20.8118	.04805	179.288	9.3618	20
21	.9164	1.0912	20.0675	.04983	21.8985	.04567	197.616	9.8476	21
22	.9126	1.0958	20.9801	.04766	22.9898	.04350	216.780	10.3327	22
23	.9088	1.1004	21.8889	.04569	24.0856	.04152	236.774	10.8171	23
24	.9050	1.1049	22.7939	.04387	25.1859	.03970	257.589	11.3008	24
25	.9013	1.1095	23.6952	.04220	26.2909	.03804	279.220	11.7838	25
26	.8975	1.1142	24.5927	.04066	27.4004	.03650	301.658	12.2662	26
27	.8938	1.1188	25.4865	.03924	28.5146	.03507	324.897	12.7478	27
28	.8901	1.1235	26.3766	.03791	29.6334	.03375	348.930	13.2288	28
29	.8864	1.1282	27.2630	.03668	30.7569	.03251	373.749	13.7090	29
30	.8827	1.1329	28.1457	.03553	31.8850	.03136	399.348	14.1886	30
36	.8610	1.1615	33.3657	.02997	38.7533	.02580	568.934	17.0514	36
42	.8398	1.1908	38.4571	.02600	45.7952	.02184	764.889	19.8894	42
48	.8191	1.2209	43.4230	.02303	53.0149	.01886	985.811	22.7025	48
54	.7989	1.2517	48.2665	.02072	60.4170	.01655	1230.35	25.4908	54
60	.7792	1.2834	52.9907	.01887	68.0061	.01470	1497.21	28.2542	60
72 84 96 108 120	.7413 .7052 .6709 .6382 .6072	1.3490 1.4180 1.4906 1.5668 1.6470	62.0928 70.7518 78.9894 86.8261 94.2814	.01610 .01413 .01266 .01152 .01061	83.7643 100.329 117.741 136.043 155.282	.01194 .009967 .008493 .007351	2092.95 2763.59 3500.45 4295.49 5141.29	33.7068 39.0604 44.3154 49.4723 54.5313	72 84 96 108 120
180	.4731	2.1137	126.455	.007908	267.289	.003741	9911.20	78.3772	180
240	.3686	2.7126	151.525	.006600	411.034	.002433	15132.2	99.8655	240
300	.2872	3.4813	171.060	.005846	595.510	.001679	20372.4	119.095	300
360	.2238	4.4677	186.282	.005368	832.259	.001202	25369.0	136.186	360
420	.1744	5.7337	198.142	.005047	1136.09	.8802-3	29973.9	151.275	420
480	.1359	7.3584	207.384	.004822	1526.02	.6553-3	34116.7	164.510	480
540	.1059	9.4435	214.586	.004660	2026.44	.4935-3	37776.8	176.045	540
600	.08251	12.1194	220.197	.004541	2668.65	.3747-3	40965.5	186.040	600

1/2%	S	Single			eries				/2%
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9950 .9901 .9851 .9802 .9754	1.0050 1.0100 1.0151 1.0202 1.0253	.9950 1.9851 2.9702 3.9505 4.9259	1.0050 .5038 .3367 .2531 .2030	1.0000 2.0050 3.0150 4.0301 5.0503	1.0000 .4988 .3317 .2481 .1980	.9901 2.9604 5.9011 9.8026	.4988 .9967 1.4938 1.9900	1 2 3 4 5
6	.9705	1.0304	5.8964	.1696	6.0755	.1646	14.6552	2.4855	6
7	.9657	1.0355	6.8621	.1457	7.1059	.1407	20.4493	2.9801	7
8	.9609	1.0407	7.8230	.1278	8.1414	.1228	27.1755	3.4738	8
9	.9561	1.0459	8.7791	.1139	9.1821	.1089	34.8244	3.9668	9
10	.9513	1.0511	9.7304	.1028	10.2280	.09777	43.3865	4.4589	10
11	.9466	1.0564	10.6770	.09366	11.2792	.08866	52.8526	4.9501	11
12	.9419	1.0617	11.6189	.08607	12.3356	.08107	63.2136	5.4406	12
13	.9372	1.0670	12.5562	.07964	13.3972	.07464	74.4602	5.9302	13
14	.9326	1.0723	13.4887	.07414	14.4642	.06914	86.5835	6.4190	14
15	.9279	1.0777	14.4166	.06936	15.5365	.06436	99.5743	6.9069	15
16	.9233	1.0831	15.3399	.06519	16.6142	.06019	113.424	7.3940	16
17	.9187	1.0885	16.2586	.06151	17.6973	.05651	128.123	7.8803	17
18	.9141	1.0939	17.1728	.05823	18.7858	.05323	143.663	8.3658	18
19	.9096	1.0994	18.0824	.05530	19.8797	.05030	160.036	8.8504	19
20	.9051	1.1049	18.9874	.05267	20.9791	.04767	177.232	9.3342	20
21	.9006	1.1104	19.8880	.05028	22.0840	.04528	195.243	9.8172	21
22	.8961	1.1160	20.7841	.04811	23.1944	.04311	214.061	10.2993	22
23	.8916	1.1216	21.6757	.04613	24.3104	.04113	233.677	10.7806	23
24	.8872	1.1272	22.5629	.04432	25.4320	.03932	254.082	11.2611	24
25	.8828	1.1328	23.4456	.04265	26.5591	.03765	275.269	11.7407	25
26	.8784	1.1385	24.3240	.04111	27.6919	.03611	297.228	12.2195	26
27	.8740	1.1442	25.1980	.03969	28.8304	.03469	319.952	12.6975	27
28	.8697	1.1499	26.0677	.03836	29.9745	.03336	343.433	13.1747	28
29	.8653	1.1556	26.9330	.03713	31.1244	.03213	367.663	13.6510	29
30	.8610	1.1614	27.7941	.03598	32.2800	.03098	392.632	14.1265	30
36	.8356	1.1967	32.8710	.03042	39.3361	.02542	557.560	16.9621	36
42	.8110	1.2330	37.7983	.02646	46.6065	.02146	747.189	19.7678	42
48	.7871	1.2705	42.5803	.02349	54.0978	.01849	959.919	22.5437	48
54	.7639	1.3091	47.2214	.02118	61.8167	.01618	1194.22	25.2899	54
60	.7414	1.3489	51.7256	.01933	69.7700	.01433	1448.65	28.0064	60
72	.6983	1.4320	60.3395	.01657	86.4089	.01157	2012.35	33.3504	72
84	.6577	1.5204	68.4530	.01461	104.074	.009609	2640.66	38.5763	84
96	.6195	1.6141	76.0952	.01314	122.829	.008141	3324.18	43.6845	96
108	.5835	1.7137	83.2934	.01201	142.740	.007006	4054.37	48.6758	108
120	.5496	1.8194	90.0735	.01110	163.879	.006102	4823.51	53.5508	120
180	.4075	2.4541	118.504	.008439	290.819	.003439	9031.34	76.2115	180
240	.3021	3.3102	139.581	.007164	462.041	.002164	13415.5	96.1131	240
300	.2240	4.4650	155.207	.006443	692.994	.001443	17603.4	113.419	300
360	.1660	6.0226	166.792	.005996	1004.52	.9955-3	21403.3	128.324	360
420	.1231	8.1236	175.380	.005702	1424.71	.7019-3	24735.7	141.041	420
540	.09126	10.9575	181.748	.005502	1991.49	.5021-3	27588.4	151.795	480
	.06766	14.7800	186.468	.005363	2755.99	.3628-3	29986.4	160.813	540
	.05016	19.9360	189.968	.005264	3787.19	.2640-3	31974.3	168.314	600

7/12	% 9	Single		Se	eries		Arith (	Grad <b>7/</b> 1	12%
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9942 .9884 .9827 .9770 .9713	1.0058 1.0117 1.0176 1.0235 1.0295	.9942 1.9826 2.9653 3.9423 4.9137	1.0058 .5044 .3372 .2537 .2035	1.0000 2.0058 3.0175 4.0351 5.0587	1.0000 .4985 .3314 .2478 .1977	.9884 2.9538 5.8848 9.7702	.4985 .9961 1.4927 1.9884	1 2 3 4 5
6	.9657	1.0355	5.8794	.1701	6.0882	.1643	14.5987	2.4830	6
7	.9601	1.0416	6.8395	.1462	7.1237	.1404	20.3593	2.9767	7
8	.9545	1.0476	7.7940	.1283	8.1653	.1225	27.0411	3.4695	8
9	.9490	1.0537	8.7430	.1144	9.2129	.1085	34.6331	3.9612	9
10	.9435	1.0599	9.6865	.1032	10.2666	.09740	43.1245	4.4520	10
11	.9380	1.0661	10.6245	.09412	11.3265	.08829	52.5048	4.9418	11
12	.9326	1.0723	11.5571	.08653	12.3926	.08069	62.7632	5.4307	12
13	.9272	1.0785	12.4843	.08010	13.4649	.07427	73.8893	5.9186	13
14	.9218	1.0848	13.4061	.07459	14.5434	.06876	85.8727	6.4055	14
15	.9165	1.0912	14.3225	.06982	15.6283	.06399	98.7030	6.8914	15
16	.9111	1.0975	15.2337	.06564	16.7194	.05981	112.370	7.3764	16
17	.9059	1.1039	16.1395	.06196	17.8170	.05613	126.864	7.8604	17
18	.9006	1.1104	17.0401	.05868	18.9209	.05285	142.174	8.3435	18
19	.8954	1.1168	17.9355	.05576	20.0313	.04992	158.291	8.8255	19
20	.8902	1.1234	18.8257	.05312	21.1481	.04729	175.204	9.3066	20
21	.8850	1.1299	19.7107	.05073	22.2715	.04490	192.905	9.7868	21
22	.8799	1.1365	20.5906	.04857	23.4014	.04273	211.382	10.2660	22
23	.8748	1.1431	21.4654	.04659	24.5379	.04075	230.627	10.7442	23
24	.8697	1.1498	22.3351	.04477	25.6810	.03894	250.631	11.2214	24
25	.8647	1.1565	23.1998	.04310	26.8308	.03727	271.383	11.6977	25
26	.8597	1.1633	24.0594	.04156	27.9874	.03573	292.874	12.1730	26
27	.8547	1.1700	24.9141	.04014	29.1506	.03430	315.096	12.6473	27
28	.8497	1.1769	25.7638	.03881	30.3207	.03298	338.038	13.1206	28
29	.8448	1.1837	26.6086	.03758	31.4975	.03175	361.692	13.5930	29
30	.8399	1.1906	27.4485	.03643	32.6813	.03060	386.048	14.0645	30
36	.8111	1.2329	32.3865	.03088	39.9301	.02504	546.449	16.8728	36
42	.7833	1.2767	37.1551	.02691	47.4364	.02108	729.961	19.6463	42
48	.7564	1.3221	41.7602	.02395	55.2092	.01811	934.810	22.3852	48
54	.7305	1.3690	46.2074	.02164	63.2581	.01581	1159.32	25.0894	54
60	.7054	1.4176	50.5020	.01980	71.5929	.01397	1401.89	27.7591	60
72	.6578	1.5201	58.6544	.01705	89.1609	.01122	1935.31	32.9951	72
84	.6135	1.6300	66.2573	.01509	107.999	.009259	2524.00	38.0940	84
96	.5721	1.7478	73.3476	.01363	128.199	.007800	3158.09	43.0565	96
108	.5336	1.8742	79.9598	.01251	149.859	.006673	3828.78	47.8838	108
120	.4976	2.0097	86.1264	.01161	173.085	.005778	4528.25	52.5768	120
180	.3510	2.8489	111.256	.008988	316.962	.003155	8241.38	74.0758	180
240	.2476	4.0387	128.983	.007753	520.927	.001920	11924.2	92.4484	240
300	.1747	5.7254	141.487	.007068	810.072	.001234	15272.4	107.942	300
360	.1232	8.1165	150.308	.006653	1219.97	.8197-3	18163.5	120.842	360
420	.08691	11.5062	156.530	.006389	1801.05	.5552-3	20576.1	131.452	420
480	.06131	16.3114	160.919	.006214	2624.81	.3810-3	22541.4	140.079	480
540	.04325	23.1235	164.015	.006097	3792.59	.2637-3	24113.5	147.020	540
600	.03051	32.7804	166.199	.006017	5448.07	.1836-3	25353.5	152.549	600

2/3%	S	Single	Series			Arith Grad			/3%
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9934 .9868 .9803 .9738 .9673	1.0067 1.0134 1.0201 1.0269 1.0338	.9934 1.9802 2.9604 3.9342 4.9015	1.0067 .5050 .3378 .2542 .2040	1.0000 2.0067 3.0200 4.0402 5.0671	1.0000 .4983 .3311 .2475 .1974	.9868 2.9473 5.8686 9.7379	.4983 .9956 1.4917 1.9867	1 2 3 4 5
6	.9609	1.0407	5.8625	.1706	6.1009	.1639	14.5425	2.4806	6
7	.9546	1.0476	6.8170	.1467	7.1416	.1400	20.2698	2.9734	7
8	.9482	1.0546	7.7652	.1288	8.1892	.1221	26.9075	3.4651	8
9	.9420	1.0616	8.7072	.1148	9.2438	.1082	34.4431	3.9557	9
10	.9357	1.0687	9.6429	.1037	10.3054	.09704	42.8645	4.4452	10
11	.9295	1.0758	10.5724	.09459	11.3741	.08792	52.1597	4.9336	11
12	.9234	1.0830	11.4958	.08699	12.4499	.08032	62.3167	5.4208	12
13	.9172	1.0902	12.4130	.08056	13.5329	.07389	73.3236	5.9070	13
14	.9112	1.0975	13.3242	.07505	14.6231	.06838	85.1688	6.3920	14
15	.9051	1.1048	14.2293	.07028	15.7206	.06361	97.8408	6.8760	15
16	.8991	1.1122	15.1285	.06610	16.8254	.05943	111.328	7.3588	16
17	.8932	1.1196	16.0217	.06242	17.9376	.05575	125.619	7.8406	17
18	.8873	1.1270	16.9089	.05914	19.0572	.05247	140.703	8.3212	18
19	.8814	1.1346	17.7903	.05621	20.1842	.04954	156.568	8.8007	19
20	.8756	1.1421	18.6659	.05357	21.3188	.04691	173.203	9.2791	20
21	.8698	1.1497	19.5357	.05119	22.4609	.04452	190.599	9.7564	21
22	.8640	1.1574	20.3997	.04902	23.6107	.04235	208.743	10.2327	22
23	.8583	1.1651	21.2579	.04704	24.7681	.04037	227.625	10.7078	23
24	.8526	1.1729	22.1105	.04523	25.9332	.03856	247.235	11.1818	24
25	.8470	1.1807	22.9575	.04356	27.1061	.03689	267.561	11.6546	25
26	.8413	1.1886	23.7988	.04202	28.2868	.03535	288.595	12.1264	26
27	.8358	1.1965	24.6346	.04059	29.4754	.03393	310.325	12.5971	27
28	.8302	1.2045	25.4648	.03927	30.6719	.03260	332.741	13.0667	28
29	.8247	1.2125	26.2896	.03804	31.8763	.03137	355.834	13.5352	29
30	.8193	1.2206	27.1088	.03689	33.0889	.03022	379.593	14.0025	30
36	.7873	1.2702	31.9118	.03134	40.5356	.02467	535.596	16.7836	36
42	.7565	1.3219	36.5270	.02738	48.2851	.02071	713.193	19.5251	42
48	.7269	1.3757	40.9619	.02441	56.3499	.01775	910.459	22.2270	48
54	.6985	1.4316	45.2235	.02211	64.7427	.01545	1125.58	24.8894	54
60	.6712	1.4898	49.3184	.02028	73.4769	.01361	1356.87	27.5125	60
72	.6198	1.6135	57.0345	.01753	92.0253	.01087	1861.66	32.6410	72
84	.5723	1.7474	64.1593	.01559	112.113	.008920	2413.27	37.6137	84
96	.5284	1.8925	70.7380	.01414	133.869	.007470	3001.54	42.4318	96
108	.4879	2.0495	76.8125	.01302	157.430	.006352	3617.62	47.0968	108
120	.4505	2.2196	82.4215	.01213	182.946	.005466	4253.80	51.6103	120
	.3024	3.3069	104.641	.009557	346.038	.002890	7531.40	71.9739	180
	.2030	4.9268	119.554	.008364	589.020	.001698	10626.2	88.8816	240
	.1362	7.3402	129.565	.007718	951.026	.001051	13304.0	102.683	300
	.09144	10.9357	136.283	.007338	1490.36	.6710-3	15504.6	113.767	360
	.06138	16.2925	140.793	.007103	2293.88	.4359-3	17252.2	122.536	420
540	.04120	24.2734	143.820	.006953	3491.01	.2865-3	18606.8	129.376	480
	.02765	36.1636	145.852	.006856	5274.54	.1896-3	19638.0	134.643	540
	.01856	53.8782	147.216	.006793	7931.73	.1261-3	20412.0	138.653	600

3/4%	S	Single	Series				Grad 3	d <b>3/4%</b>	
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9926 .9852 .9778 .9706	1.0075 1.0151 1.0227 1.0303 1.0381	.9926 1.9777 2.9556 3.9261 4.8894	1.0075 .5056 .3383 .2547 .2045	1.0000 2.0075 3.0226 4.0452 5.0756	1.0000 .4981 .3308 .2472 .1970	.9852 2.9408 5.8525 9.7058	.4981 .9950 1.4907 1.9851	1 2 3 4 5
6	.9562	1.0459	5.8456	.1711	6.1136	.1636	14.4866	2.4782	6
7	.9490	1.0537	6.7946	.1472	7.1595	.1397	20.1808	2.9701	7
8	.9420	1.0616	7.7366	.1293	8.2132	.1218	26.7747	3.4608	8
9	.9350	1.0696	8.6716	.1153	9.2748	.1078	34.2544	3.9502	9
10	.9280	1.0776	9.5996	.1042	10.3443	.09667	42.6064	4.4384	10
11	.9211	1.0857	10.5207	.09505	11.4219	.08755	51.8174	4.9253	11
12	.9142	1.0938	11.4349	.08745	12.5076	.07995	61.8740	5.4110	12
13	.9074	1.1020	12.3423	.08102	13.6014	.07352	72.7632	5.8954	13
14	.9007	1.1103	13.2430	.07551	14.7034	.06801	84.4720	6.3786	14
15	.8940	1.1186	14.1370	.07074	15.8137	.06324	96.9876	6.8606	15
16	.8873	1.1270	15.0243	.06656	16.9323	.05906	110.297	7.3413	16
17	.8807	1.1354	15.9050	.06287	18.0593	.05537	124.389	7.8207	17
18	.8742	1.1440	16.7792	.05960	19.1947	.05210	139.249	8.2989	18
19	.8676	1.1525	17.6468	.05667	20.3387	.04917	154.867	8.7759	19
20	.8612	1.1612	18.5080	.05403	21.4912	.04653	171.230	9.2516	20
21	.8548	1.1699	19.3628	.05165	22.6524	.04415	188.325	9.7261	21
22	.8484	1.1787	20.2112	.04948	23.8223	.04198	206.142	10.1994	22
23	.8421	1.1875	21.0533	.04750	25.0010	.04000	224.668	10.6714	23
24	.8358	1.1964	21.8891	.04568	26.1885	.03818	243.892	11.1422	24
25	.8296	1.2054	22.7188	.04402	27.3849	.03652	263.803	11.6117	25
26	.8234	1.2144	23.5422	.04248	28.5903	.03498	284.389	12.0800	26
27	.8173	1.2235	24.3595	.04105	29.8047	.03355	305.639	12.5470	27
28	.8112	1.2327	25.1707	.03973	31.0282	.03223	327.542	13.0128	28
29	.8052	1.2420	25.9759	.03850	32.2609	.03100	350.087	13.4774	29
30	.7992	1.2513	26.7751	.03735	33.5029	.02985	373.263	13.9407	30
36	.7641	1.3086	31.4468	.03180	41.1527	.02430	524.992	16.6946	36
42	.7306	1.3686	35.9137	.02784	49.1533	.02034	696.871	19.4040	42
48	.6986	1.4314	40.1848	.02489	57.5207	.01739	886.840	22.0691	48
54	.6680	1.4970	44.2686	.02259	66.2718	.01509	1092.98	24.6898	54
60	.6387	1.5657	48.1734	.02076	75.4241	.01326	1313.52	27.2665	60
72	.5839	1.7126	55.4768	.01803	95.0070	.01053	1791.25	32.2882	72
84	.5338	1.8732	62.1540	.01609	116.427	.008589	2308.13	37.1357	84
96	.4881	2.0489	68.2584	.01465	139.856	.007150	2853.94	41.8107	96
108	.4462	2.2411	73.8394	.01354	165.483	.006043	3419.90	46.3154	108
120	.4079	2.4514	78.9417	.01267	193.514	.005168	3998.56	50.6521	120
	.2605	3.8380	98.5934	.01014	378.406	.002643	6892.60	69.9094	180
	.1664	6.0092	111.145	.008997	667.887	.001497	9494.12	85.4210	240
	.1063	9.4084	119.162	.008392	1121.12	.8920-3	11636.7	97.6548	300
	.06789	14.7306	124.282	.008046	1830.74	.5462-3	13312.4	107.114	360
	.04336	23.0634	127.552	.007840	2941.78	.3399-3	14578.9	114.297	420
540	.02769	36.1099	129.641	.007714	4681.32	.2136-3	15513.1	119.662	480
	.01769	56.5366	130.975	.007635	7404.88	.1350-3	16189.8	123.610	540
	.01130	88.5183	131.827	.007586	11669.1	.8570-4	16673.2	126.478	600

5/6%	S	Single	Series			S Arith Gr			rad <b>5/6%</b>	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m	
1 2 3 4 5	.9917 .9835 .9754 .9673 .9594	1.0083 1.0167 1.0252 1.0338 1.0424	.9917 1.9753 2.9507 3.9180 4.8774	1.0083 .5063 .3389 .2552 .2050	1.0000 2.0083 3.0251 4.0503 5.0840	1.0000 .4979 .3306 .2469 .1967	.9835 2.9344 5.8364 9.6738	.4979 .9945 1.4896 1.9834	1 2 3 4 5	
6	.9514	1.0511	5.8288	.1716	6.1264	.1632	14.4310	2.4758	6	
7	.9436	1.0598	6.7724	.1477	7.1775	.1393	20.0923	2.9668	7	
8	.9358	1.0686	7.7081	.1297	8.2373	.1214	26.6427	3.4564	8	
9	.9280	1.0775	8.6362	.1158	9.3059	.1075	34.0670	3.9447	9	
10	.9204	1.0865	9.5565	.1046	10.3835	.09631	42.3502	4.4315	10	
11	.9128	1.0956	10.4693	.09552	11.4700	.08718	51.4778	4.9170	11	
12	.9052	1.1047	11.3745	.08792	12.5656	.07958	61.4351	5.4011	12	
13	.8977	1.1139	12.2722	.08148	13.6703	.07315	72.2079	5.8838	13	
14	.8903	1.1232	13.1626	.07597	14.7842	.06764	83.7819	6.3652	14	
15	.8830	1.1326	14.0455	.07120	15.9074	.06286	96.1433	6.8451	15	
16 17 18 19 20	.8757 .8684 .8612 .8541 .8471	1.1420 1.1515 1.1611 1.1708 1.1805	14.9212 15.7896 16.6508 17.5050 18.3520	.06702 .06333 .06006 .05713	17.0400 18.1820 19.3335 20.4946 21.6654	.05869 .05500 .05172 .04879 .04616	109.278 123.173 137.814 153.188 169.283	7.3237 7.8009 8.2767 8.7511 9.2242	16 17 18 19 20	
21	.8401	1.1904	19.1921	.05210	22.8459	.04377	186.084	9.6959	21	
22	.8331	1.2003	20.0252	.04994	24.0363	.04160	203.579	10.1662	22	
23	.8262	1.2103	20.8514	.04796	25.2366	.03962	221.757	10.6351	23	
24	.8194	1.2204	21.6709	.04614	26.4469	.03781	240.603	11.1026	24	
25	.8126	1.2306	22.4835	.04448	27.6673	.03614	260.106	11.5688	25	
26	.8059	1.2408	23.2894	.04294	28.8979	.03460	280.254	12.0336	26	
27	.7993	1.2512	24.0887	.04151	30.1387	.03318	301.035	12.4970	27	
28	.7927	1.2616	24.8813	.04019	31.3898	.03186	322.437	12.9590	28	
29	.7861	1.2721	25.6674	.03896	32.6514	.03063	344.448	13.4196	29	
30	.7796	1.2827	26.4470	.03781	33.9235	.02948	367.056	13.8789	30	
36	.7417	1.3482	30.9912	.03227	41.7818	.02393	514.633	16.6058	36	
42	.7057	1.4170	35.3147	.02832	50.0413	.01998	680.982	19.2832	42	
48	.6714	1.4894	39.4282	.02536	58.7225	.01703	863.931	21.9115	48	
54	.6388	1.5654	43.3418	.02307	67.8469	.01474	1061.48	24.4908	54	
60	.6078	1.6453	47.0654	.02125	77.4371	.01291	1271.77	27.0213	60	
72	.5502	1.8176	53.9787	.01853	98.1113	.01019	1723.90	31.9368	72	
84	.4980	2.0079	60.2367	.01660	120.950	.008268	2208.28	36.6601	84	
96	.4508	2.2182	65.9015	.01517	146.181	.006841	2714.72	41.1936	96	
108	.4081	2.4504	71.0294	.01408	174.054	.005745	3234.69	45.5402	108	
120	.3694	2.7070	75.6712	.01322	204.845	.004882	3761.08	49.7029	120	
180	.2245	4.4539	93.0574	.01075	414.470	.002413	6317.23	67.8853	180	
240	.1365	7.3281	103.625	.009650	759.369	.001317	8504.86	82.0738	240	
300	.08294	12.0569	110.047	.009087	1326.83	.7537-3	10219.8	92.8677	300	
360	.05041	19.8374	113.951	.008776	2260.49	.4424-3	11496.4	100.889	360	
420	.03064	32.6387	116.323	.008597	3796.64	.2634-3	12414.6	106.725	420	
480	.01862	53.7007	117.765	.008491	6324.08	.1581-3	13059.2	110.892	480	
540	.01132	88.3542	118.642	.008429	10482.5	.9540-4	13503.6	113.818	540	
600 .	006879	145.370	119.175	.008391	17324.4	.5772-4	13805.7	115.844	600	

11/1	<b>2%</b> s	Single		Series				Arith Grad 11/12%		
m	P F	F P	P A	A P	F A	A F	P G	A G	m	
1 2 3 4 5	.9909 .9819 .9730 .9642 .9554	1.0092 1.0184 1.0278 1.0372 1.0467	.9909 1.9728 2.9458 3.9100 4.8654	1.0092 .5069 .3395 .2558 .2055	1.0000 2.0092 3.0276 4.0553 5.0925	1.0000 .4977 .3303 .2466 .1964	.9819 2.9279 5.8204 9.6420	.4977 .9939 1.4886 1.9818	1 2 3 4 5	
6	.9467	1.0563	5.8121	.1721	6.1392	.1629	14.3756	2.4734	6	
7	.9381	1.0660	6.7502	.1481	7.1955	.1390	20.0043	2.9635	7	
8	.9296	1.0757	7.6798	.1302	8.2614	.1210	26.5115	3.4521	8	
9	.9212	1.0856	8.6010	.1163	9.3372	.1071	33.8808	3.9392	9	
10	.9128	1.0955	9.5138	.1051	10.4227	.09594	42.0959	4.4247	10	
11	.9045	1.1056	10.4183	.09599	11.5183	.08682	51.1409	4.9088	11	
12	.8963	1.1157	11.3146	.08838	12.6239	.07921	61.0000	5.3913	12	
13	.8881	1.1259	12.2027	.08195	13.7396	.07278	71.6577	5.8723	13	
14	.8801	1.1363	13.0828	.07644	14.8655	.06727	83.0987	6.3518	14	
15	.8721	1.1467	13.9549	.07166	16.0018	.06249	95.3078	6.8297	15	
16	.8642	1.1572	14.8190	.06748	17.1485	.05831	108.270	7.3062	16	
17	.8563	1.1678	15.6753	.06379	18.3057	.05463	121.971	7.7811	17	
18	.8485	1.1785	16.5239	.06052	19.4735	.05135	136.396	8.2545	18	
19	.8408	1.1893	17.3647	.05759	20.6520	.04842	151.531	8.7264	19	
20	.8332	1.2002	18.1979	.05495	21.8413	.04578	167.362	9.1968	20	
21	.8256	1.2112	19.0235	.05257	23.0415	.04340	183.874	9.6656	21	
22	.8181	1.2223	19.8416	.05040	24.2527	.04123	201.054	10.1330	22	
23	.8107	1.2335	20.6523	.04842	25.4750	.03925	218.890	10.5988	23	
24	.8033	1.2448	21.4556	.04661	26.7086	.03744	237.366	11.0631	24	
25	.7960	1.2562	22.2516	.04494	27.9534	.03577	256.471	11.5259	25	
26	.7888	1.2678	23.0404	.04340	29.2096	.03424	276.191	11.9872	26	
27	.7816	1.2794	23.8221	.04198	30.4774	.03281	296.513	12.4470	27	
28	.7745	1.2911	24.5966	.04066	31.7568	.03149	317.425	12.9052	28	
29	.7675	1.3029	25.3641	.03943	33.0479	.03026	338.915	13.3620	29	
30	.7605	1.3149	26.1246	.03828	34.3508	.02911	360.970	13.8172	30	
36	.7200	1.3889	30.5449	.03274	42.4231	.02357	504.511	16.5170	36	
42	.6816	1.4670	34.7296	.02879	50.9497	.01963	665.512	19.1627	42	
48	.6453	1.5496	38.6914	.02585	59.9562	.01668	841.707	21.7544	48	
54	.6109	1.6368	42.4421	.02356	69.4694	.01439	1031.02	24.2923	54	
60	.5784	1.7289	45.9930	.02174	79.5181	.01258	1231.55	26.7769	60	
72	.5184	1.9290	52.5373	.01903	101.344	.009867	1659.49	31.5869	72	
84	.4646	2.1522	58.4029	.01712	125.695	.007956	2113.43	36.1871	84	
96	.4164	2.4013	63.6601	.01571	152.864	.006542	2583.38	40.5809	96	
108	.3733	2.6791	68.3720	.01463	183.177	.005459	3061.13	44.7717	108	
120	.3345	2.9891	72.5953	.01378	216.998	.004608	3540.01	48.7636	120	
180	.1935	5.1680	87.9819	.01137	454.690	.002199	5798.41	65.9046	180	
240	.1119	8.9350	96.8815	.01032	865.638	.001155	7638.65	78.8452	240	
300	.06473	15.4479	102.029	.009801	1576.13	.6345-3	9011.88	88.3266	300	
360	.03744	26.7081	105.006	.009523	2804.52	.3566-3	9984.80	95.0875	360	
420	.02166	46.1761	106.728	.009370	4928.30	.2029-3	10650.8	99.7939	420	
480	.01253	79.8345	107.724	.009283	8600.13	.1163-3	11095.9	103.002	480	
540	.007245	138.027	108.301	.009234	14948.4	.6690-4	11387.8	105.150	540	
600	.004190	238.637	108.634	.009205	25924.1	.3857-4	11576.7	106.566	600	

1%	S	Single Series			Arith Grad			1%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9901 .9803 .9706 .9610 .9515	1.0100 1.0201 1.0303 1.0406 1.0510	.9901 1.9704 2.9410 3.9020 4.8534	1.0100 .5075 .3400 .2563 .2060	1.0000 2.0100 3.0301 4.0604 5.1010	1.0000 .4975 .3300 .2463 .1960	.9803 2.9215 5.8044 9.6103	.4975 .9934 1.4876 1.9801	1 2 3 4 5
6	.9420	1.0615	5.7955	.1725	6.1520	.1625	14.3205	2.4710	6
7	.9327	1.0721	6.7282	.1486	7.2135	.1386	19.9168	2.9602	7
8	.9235	1.0829	7.6517	.1307	8.2857	.1207	26.3812	3.4478	8
9	.9143	1.0937	8.5660	.1167	9.3685	.1067	33.6959	3.9337	9
10	.9053	1.1046	9.4713	.1056	10.4622	.09558	41.8435	4.4179	10
11	.8963	1.1157	10.3676	.09645	11.5668	.08645	50.8067	4.9005	11
12	.8874	1.1268	11.2551	.08885	12.6825	.07885	60.5687	5.3815	12
13	.8787	1.1381	12.1337	.08241	13.8093	.07241	71.1126	5.8607	13
14	.8700	1.1495	13.0037	.07690	14.9474	.06690	82.4221	6.3384	14
15	.8613	1.1610	13.8651	.07212	16.0969	.06212	94.4810	6.8143	15
16	.8528	1.1726	14.7179	.06794	17.2579	.05794	107.273	7.2886	16
17	.8444	1.1843	15.5623	.06426	18.4304	.05426	120.783	7.7613	17
18	.8360	1.1961	16.3983	.06098	19.6147	.05098	134.996	8.2323	18
19	.8277	1.2081	17.2260	.05805	20.8109	.04805	149.895	8.7017	19
20	.8195	1.2202	18.0456	.05542	22.0190	.04542	165.466	9.1694	20
21	.8114	1.2324	18.8570	.05303	23.2392	.04303	181.695	9.6354	21
22	.8034	1.2447	19.6604	.05086	24.4716	.04086	198.566	10.0998	22
23	.7954	1.2572	20.4558	.04889	25.7163	.03889	216.066	10.5626	23
24	.7876	1.2697	21.2434	.04707	26.9735	.03707	234.180	11.0237	24
25	.7798	1.2824	22.0232	.04541	28.2432	.03541	252.894	11.4831	25
26	.7720	1.2953	22.7952	.04387	29.5256	.03387	272.196	11.9409	26
27	.7644	1.3082	23.5596	.04245	30.8209	.03245	292.070	12.3971	27
28	.7568	1.3213	24.3164	.04112	32.1291	.03112	312.505	12.8516	28
29	.7493	1.3345	25.0658	.03990	33.4504	.02990	333.486	13.3044	29
30	.7419	1.3478	25.8077	.03875	34.7849	.02875	355.002	13.7557	30
36 42 48 54 60	.6989 .6584 .6203 .5843	1.4308 1.5188 1.6122 1.7114 1.8167	30.1075 34.1581 37.9740 41.5687 44.9550	.03321 .02928 .02633 .02406 .02224	43.0769 51.8790 61.2226 71.1410 81.6697	.02321 .01928 .01633 .01406 .01224	494.621 650.451 820.146 1001.57 1192.81	16.4285 19.0424 21.5976 24.0945 26.5333	36 42 48 54 60
72	.4885	2.0471	51.1504	.01955	104.710	.009550	1597.87	31.2386	72
84	.4335	2.3067	56.6485	.01765	130.672	.007653	2023.32	35.7170	84
96	.3847	2.5993	61.5277	.01625	159.927	.006253	2459.43	39.9727	96
108	.3414	2.9289	65.8578	.01518	192.893	.005184	2898.42	44.0103	108
120	.3030	3.3004	69.7005	.01435	230.039	.004347	3334.11	47.8349	120
180	.1668	5.9958	83.3217	.01200	499.580	.002002	5330.07	63.9697	180
240	.09181	10.8926	90.8194	.01101	989.255	.001011	6878.60	75.7393	240
300	.05053	19.7885	94.9466	.01053	1878.85	.5322-3	7978.62	84.0328	300
360	.02782	35.9496	97.2183	.01029	3494.96	.2861-3	8720.43	89.6995	360
420	.01531	65.3096	98.4688	.01016	6430.96	.1555-3	9203.79	93.4691	420
480	.008428	118.648	99.1572	.01008	11764.8	.8500-4	9511.16	95.9200	480
540	.004639	215.547	99.5361	.01005	21454.7	.4661-4	9703.08	97.4831	540
600	.002554	391.583	99.7446	.01003	39058.3	.2560-4	9821.24	98.4638	600

1 1/	1/12% Single Series					Arith (	Arith Grad 1 1/12%		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9893 .9787 .9682 .9578 .9476	1.0108 1.0218 1.0329 1.0440 1.0554	.9893 1.9680 2.9362 3.8940 4.8415	1.0108 .5081 .3406 .2568 .2065	1.0000 2.0108 3.0326 4.0655 5.1095	1.0000 .4973 .3297 .2460 .1957	.9787 2.9151 5.7885 9.5787	.4973 .9928 1.4865 1.9785	1 2 3 4 5
6	.9374	1.0668	5.7789	.1730	6.1649	.1622	14.2657	2.4686	6
7	.9273	1.0783	6.7063	.1491	7.2317	.1383	19.8298	2.9569	7
8	.9174	1.0900	7.6237	.1312	8.3100	.1203	26.2517	3.4434	8
9	.9076	1.1018	8.5313	.1172	9.4000	.1064	33.5123	3.9282	9
10	.8979	1.1138	9.4291	.1061	10.5019	.09522	41.5929	4.4111	10
11	.8882	1.1258	10.3173	.09692	11.6156	.08609	50.4752	4.8923	11
12	.8787	1.1380	11.1960	.08932	12.7415	.07848	60.1410	5.3716	12
13	.8693	1.1504	12.0653	.08288	13.8795	.07205	70.5725	5.8492	13
14	.8600	1.1628	12.9253	.07737	15.0299	.06653	81.7522	6.3250	14
15	.8508	1.1754	13.7761	.07259	16.1927	.06176	93.6629	6.7990	15
16	.8416	1.1882	14.6177	.06841	17.3681	.05758	106.287	7.2711	16
17	.8326	1.2010	15.4503	.06472	18.5563	.05389	119.609	7.7415	17
18	.8237	1.2140	16.2740	.06145	19.7573	.05061	133.612	8.2102	18
19	.8149	1.2272	17.0889	.05852	20.9713	.04768	148.280	8.6770	19
20	.8061	1.2405	17.8950	.05588	22.1985	.04505	163.597	9.1420	20
21	.7975	1.2539	18.6925	.05350	23.4390	.04266	179.547	9.6053	21
22	.7890	1.2675	19.4815	.05133	24.6929	.04050	196.114	10.0667	22
23	.7805	1.2812	20.2620	.04935	25.9604	.03852	213.285	10.5264	23
24	.7721	1.2951	21.0341	.04754	27.2417	.03671	231.044	10.9843	24
25	.7639	1.3091	21.7980	.04588	28.5368	.03504	249.377	11.4404	25
26	.7557	1.3233	22.5536	.04434	29.8459	.03351	268.269	11.8947	26
27	.7476	1.3377	23.3012	.04292	31.1693	.03208	287.705	12.3472	27
28	.7396	1.3522	24.0408	.04160	32.5069	.03076	307.674	12.7980	28
29	.7316	1.3668	24.7724	.04037	33.8591	.02953	328.159	13.2470	29
30	.7238	1.3816	25.4962	.03922	35.2259	.02839	349.149	13.6942	30
36	.6785	1.4739	29.6789	.03369	43.7433	.02286	484.956	16.3401	36
42	.6360	1.5723	33.5998	.02976	52.8297	.01893	635.787	18.9223	42
48	.5962	1.6773	37.2752	.02683	62.5228	.01599	799.227	21.4412	48
54	.5589	1.7894	40.7205	.02456	72.8633	.01372	973.106	23.8972	54
60	.5239	1.9089	43.9501	.02275	83.8944	.01192	1155.48	26.2907	60
72	.4603	2.1723	49.8154	.02007	108.216	.009241	1538.90	30.8921	72
84	.4045	2.4722	54.9693	.01819	135.895	.007359	1937.67	35.2500	84
96	.3554	2.8134	59.4981	.01681	167.394	.005974	2342.41	39.3696	96
108	.3123	3.2018	63.4776	.01575	203.242	.004920	2745.82	43.2565	108
120	.2744	3.6437	66.9744	.01493	244.037	.004098	3142.26	46.9173	120
180	.1438	6.9554	79.0363	.01265	549.726	.001819	4906.80	62.0828	180
240	.07532	13.2768	85.3551	.01172	1133.24	.8824-3	6210.32	72.7586	240
300	.03946	25.3435	88.6654	.01128	2247.09	.4450-3	7091.82	79.9841	300
360	.02067	48.3771	90.3996	.01106	4373.27	.2287-3	7657.67	84.7091	360
420	.01083	92.3449	91.3081	.01095	8431.84	.1186-3	8008.61	87.7097	420
480	.005673	176.273	91.7840	.01090	16179.1	.6181-4	8221.01	89.5691	480
540	.002972	336.480	92.0334	.01087	30967.4	.3229-4	8347.25	90.6981	540
600	.001557	642.293	92.1640	.01085	59196.2	.1689-4	8421.21	91.3721	600

<b>1 1/6%</b> Single				Se	eries		Arith Grad 1 1/6%		
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9885 .9771 .9658 .9547 .9437	1.0117 1.0235 1.0354 1.0475 1.0597	.9885 1.9655 2.9313 3.8860 4.8297	1.0117 .5088 .3411 .2573 .2071	1.0000 2.0117 3.0351 4.0705 5.1180	1.0000 .4971 .3295 .2457 .1954	.9771 2.9087 5.7727 9.5473	.4971 .9923 1.4855 1.9768	1 2 3 4 5
6	.9328	1.0721	5.7624	.1735	6.1777	.1619	14.2111	2.4662	6
7	.9220	1.0846	6.6844	.1496	7.2498	.1379	19.7432	2.9536	7
8	.9114	1.0972	7.5958	.1317	8.3344	.1200	26.1229	3.4391	8
9	.9009	1.1100	8.4967	.1177	9.4316	.1060	33.3299	3.9227	9
10	.8905	1.1230	9.3872	.1065	10.5417	.09486	41.3442	4.4043	10
11	.8802	1.1361	10.2674	.09740	11.6647	.08573	50.1464	4.8840	11
12	.8701	1.1493	11.1375	.08979	12.8007	.07812	59.7171	5.3618	12
13	.8600	1.1628	11.9975	.08335	13.9501	.07168	70.0374	5.8377	13
14	.8501	1.1763	12.8476	.07784	15.1128	.06617	81.0889	6.3116	14
15	.8403	1.1900	13.6879	.07306	16.2892	.06139	92.8532	6.7836	15
16	.8306	1.2039	14.5185	.06888	17.4792	.05721	105.312	7.2537	16
17	.8210	1.2180	15.3396	.06519	18.6831	.05352	118.449	7.7218	17
18	.8116	1.2322	16.1511	.06192	19.9011	.05025	132.246	8.1880	18
19	.8022	1.2466	16.9533	.05899	21.1333	.04732	146.686	8.6523	19
20	.7930	1.2611	17.7463	.05635	22.3798	.04468	161.752	9.1147	20
21	.7838	1.2758	18.5301	.05397	23.6409	.04230	177.428	9.5751	21
22	.7748	1.2907	19.3049	.05180	24.9167	.04013	193.698	10.0336	22
23	.7658	1.3058	20.0707	.04982	26.2074	.03816	210.547	10.4902	23
24	.7570	1.3210	20.8277	.04801	27.5132	.03635	227.958	10.9449	24
25	.7483	1.3364	21.5760	.04635	28.8342	.03468	245.917	11.3977	25
26	.7397	1.3520	22.3157	.04481	30.1706	.03314	264.408	11.8485	26
27	.7311	1.3678	23.0468	.04339	31.5226	.03172	283.417	12.2975	27
28	.7227	1.3837	23.7695	.04207	32.8903	.03040	302.930	12.7445	28
29	.7144	1.3999	24.4838	.04084	34.2740	.02918	322.932	13.1896	29
30	.7061	1.4162	25.1900	.03970	35.6739	.02803	343.409	13.6328	30
36	.6586	1.5183	29.2589	.03418	44.4228	.02251	475.512	16.2519	36
42	.6144	1.6277	33.0543	.03025	53.8023	.01859	621.507	18.8026	42
48	.5731	1.7450	36.5945	.02733	63.8577	.01566	778.928	21.2854	48
54	.5345	1.8708	39.8968	.02506	74.6379	.01340	945.579	23.7006	54
60	.4986	2.0056	42.9770	.02327	86.1951	.01160	1119.51	26.0490	60
72	.4338	2.3051	48.5302	.02061	111.868	.008939	1482.47	30.5474	72
84	.3774	2.6494	53.3618	.01874	141.376	.007073	1856.25	34.7862	84
96	.3284	3.0450	57.5655	.01737	175.290	.005705	2231.91	38.7716	96
108	.2857	3.4998	61.2231	.01633	214.269	.004667	2602.65	42.5109	108
120	.2486	4.0225	64.4054	.01553	259.069	.003860	2963.40	46.0117	120
180	.1240	8.0675	75.0897	.01332	605.786	.001651	4523.82	60.2456	180
240	.06180	16.1803	80.4168	.01244	1301.17	.7685-3	5621.48	69.9043	240
300	.03082	32.4513	83.0730	.01204	2695.83	.3709-3	6328.14	76.1757	300
360	.01536	65.0847	84.3973	.01185	5492.97	.1821-3	6759.95	80.0967	360
420	.007661	130.534	85.0576	.01176	11103.0	.9007-4	7014.87	82.4719	420
480	.003820	261.801	85.3869	.01171	22354.4	.4473-4	7161.72	83.8738	480
540	.001905	525.071	85.5510	.01169	44920.4	.2226-4	7244.80	84.6839	540
600	.9496-3	1053.09	85.6329	.01168	90178.9	.1109-4	7291.13	85.1440	600

1 1/	<b>4%</b> s	Single		Se	eries		Arith Grad 1 1/4%			
m	P F	F P	P A	A P	F A	A F	P G	A G	m	
1 2 3 4 5	.9877 .9755 .9634 .9515 .9398	1.0125 1.0252 1.0380 1.0509 1.0641	.9877 1.9631 2.9265 3.8781 4.8178	1.0125 .5094 .3417 .2579 .2076	1.0000 2.0125 3.0377 4.0756 5.1266	1.0000 .4969 .3292 .2454 .1951	.9755 2.9023 5.7569 9.5160	.4969 .9917 1.4845 1.9752	1 2 3 4 5	
6	.9282	1.0774	5.7460	.1740	6.1907	.1615	14.1569	2.4638	6	
7	.9167	1.0909	6.6627	.1501	7.2680	.1376	19.6571	2.9503	7	
8	.9054	1.1045	7.5681	.1321	8.3589	.1196	25.9949	3.4348	8	
9	.8942	1.1183	8.4623	.1182	9.4634	.1057	33.1487	3.9172	9	
10	.8832	1.1323	9.3455	.1070	10.5817	.09450	41.0973	4.3975	10	
11	.8723	1.1464	10.2178	.09787	11.7139	.08537	49.8201	4.8758	11	
12	.8615	1.1608	11.0793	.09026	12.8604	.07776	59.2967	5.3520	12	
13	.8509	1.1753	11.9302	.08382	14.0211	.07132	69.5072	5.8262	13	
14	.8404	1.1900	12.7706	.07831	15.1964	.06581	80.4320	6.2982	14	
15	.8300	1.2048	13.6005	.07353	16.3863	.06103	92.0519	6.7682	15	
16	.8197	1.2199	14.4203	.06935	17.5912	.05685	104.348	7.2362	16	
17	.8096	1.2351	15.2299	.06566	18.8111	.05316	117.302	7.7021	17	
18	.7996	1.2506	16.0295	.06238	20.0462	.04988	130.896	8.1659	18	
19	.7898	1.2662	16.8193	.05946	21.2968	.04696	145.111	8.6277	19	
20	.7800	1.2820	17.5993	.05682	22.5630	.04432	159.932	9.0874	20	
21	.7704	1.2981	18.3697	.05444	23.8450	.04194	175.339	9.5450	21	
22	.7609	1.3143	19.1306	.05227	25.1431	.03977	191.317	10.0006	22	
23	.7515	1.3307	19.8820	.05030	26.4574	.03780	207.850	10.4542	23	
24	.7422	1.3474	20.6242	.04849	27.7881	.03599	224.920	10.9056	24	
25	.7330	1.3642	21.3573	.04682	29.1354	.03432	242.513	11.3551	25	
26	.7240	1.3812	22.0813	.04529	30.4996	.03279	260.613	11.8024	26	
27	.7150	1.3985	22.7963	.04387	31.8809	.03137	279.204	12.2478	27	
28	.7062	1.4160	23.5025	.04255	33.2794	.03005	298.272	12.6911	28	
29	.6975	1.4337	24.2000	.04132	34.6954	.02882	317.802	13.1323	29	
30	.6889	1.4516	24.8889	.04018	36.1291	.02768	337.780	13.5715	30	
36	.6394	1.5639	28.8473	.03467	45.1155	.02217	466.283	16.1639	36	
42	.5935	1.6850	32.5213	.03075	54.7973	.01825	607.601	18.6832	42	
48	.5509	1.8154	35.9315	.02783	65.2284	.01533	759.230	21.1299	48	
54	.5113	1.9558	39.0967	.02558	76.4666	.01308	918.959	23.5048	54	
60	.4746	2.1072	42.0346	.02379	88.5745	.01129	1084.84	25.8083	60	
72 84 96 108 120	.4088 .3522 .3034 .2614 .2252	2.4459 2.8391 3.2955 3.8253 4.4402	47.2925 51.8222 55.7246 59.0865 61.9828	.02115 .01930 .01795 .01692 .01613	115.674 147.129 183.641 226.023 275.217	.008645 .006797 .005445 .004424	1428.46 1778.84 2127.52 2468.26 2796.57	30.2047 34.3258 38.1793 41.7737 45.1184	72 84 96 108 120	
180	.1069	9.3563	71.4496	.01400	668.507	.001496	4176.91	58.4595	180	
240	.05072	19.7155	75.9423	.01317	1497.24	.6679-3	5101.53	67.1764	240	
300	.02407	41.5441	78.0743	.01281	3243.53	.3083-3	5668.25	72.6007	300	
360	.01142	87.5410	79.0861	.01264	6923.28	.1444-3	5997.90	75.8401	360	
420	.005421	184.465	79.5663	.01257	14677.2	.6813-4	6183.16	77.7107	420	
480	.002573	388.701	79.7942	.01253	31016.1	.3224-4	6284.74	78.7619	480	
540	.001221	819.063	79.9023	.01252	65445.0	.1528-4	6339.44	79.3399	540	
600	.5794-3	1725.91	79.9536	.01251	137993	.7247-5	6368.48	79.6522	600	

1 1/	<b>2%</b> s	Single		Se	eries		Arith Grad 1 1/2%			
m	P F	F P	P A	A P	F A	A F	P G	A G	m	
1 2 3 4 5	.9852 .9707 .9563 .9422 .9283	1.0150 1.0302 1.0457 1.0614 1.0773	.9852 1.9559 2.9122 3.8544 4.7826	1.0150 .5113 .3434 .2594 .2091	1.0000 2.0150 3.0452 4.0909 5.1523	1.0000 .4963 .3284 .2444 .1941	.9707 2.8833 5.7098 9.4229	.4963 .9901 1.4814 1.9702	1 2 3 4 5	
6	.9145	1.0934	5.6972	.1755	6.2296	.1605	13.9956	2.4566	6	
7	.9010	1.1098	6.5982	.1516	7.3230	.1366	19.4018	2.9405	7	
8	.8877	1.1265	7.4859	.1336	8.4328	.1186	25.6157	3.4219	8	
9	.8746	1.1434	8.3605	.1196	9.5593	.1046	32.6125	3.9008	9	
10	.8617	1.1605	9.2222	.1084	10.7027	.09343	40.3675	4.3772	10	
11	.8489	1.1779	10.0711	.09929	11.8633	.08429	48.8568	4.8512	11	
12	.8364	1.1956	10.9075	.09168	13.0412	.07668	58.0571	5.3227	12	
13	.8240	1.2136	11.7315	.08524	14.2368	.07024	67.9454	5.7917	13	
14	.8118	1.2318	12.5434	.07972	15.4504	.06472	78.4994	6.2582	14	
15	.7999	1.2502	13.3432	.07494	16.6821	.05994	89.6974	6.7223	15	
16	.7880	1.2690	14.1313	.07077	17.9324	.05577	101.518	7.1839	16	
17	.7764	1.2880	14.9076	.06708	19.2014	.05208	113.940	7.6431	17	
18	.7649	1.3073	15.6726	.06381	20.4894	.04881	126.943	8.0997	18	
19	.7536	1.3270	16.4262	.06088	21.7967	.04588	140.508	8.5539	19	
20	.7425	1.3469	17.1686	.05825	23.1237	.04325	154.615	9.0057	20	
21	.7315	1.3671	17.9001	.05587	24.4705	.04087	169.245	9.4550	21	
22	.7207	1.3876	18.6208	.05370	25.8376	.03870	184.380	9.9018	22	
23	.7100	1.4084	19.3309	.05173	27.2251	.03673	200.001	10.3462	23	
24	.6995	1.4295	20.0304	.04992	28.6335	.03492	216.090	10.7881	24	
25	.6892	1.4509	20.7196	.04826	30.0630	.03326	232.631	11.2276	25	
26	.6790	1.4727	21.3986	.04673	31.5140	.03173	249.607	11.6646	26	
27	.6690	1.4948	22.0676	.04532	32.9867	.03032	267.000	12.0992	27	
28	.6591	1.5172	22.7267	.04400	34.4815	.02900	284.796	12.5313	28	
29	.6494	1.5400	23.3761	.04278	35.9987	.02778	302.978	12.9610	29	
30	.6398	1.5631	24.0158	.04164	37.5387	.02664	321.531	13.3883	30	
36	.5851	1.7091	27.6607	.03615	47.2760	.02115	439.830	15.9009	36	
42	.5351	1.8688	30.9941	.03226	57.9231	.01726	568.020	18.3267	42	
48	.4894	2.0435	34.0426	.02937	69.5652	.01437	703.546	20.6667	48	
54	.4475	2.2344	36.8305	.02715	82.2952	.01215	844.218	22.9217	54	
60	.4093	2.4432	39.3803	.02539	96.2147	.01039	988.167	25.0930	60	
72	.3423	2.9212	43.8447	.02281	128.077	.007808	1279.79	29.1893	72	
84	.2863	3.4926	47.5786	.02102	166.173	.006018	1568.51	32.9668	84	
96	.2395	4.1758	50.7017	.01972	211.720	.004723	1847.47	36.4381	96	
108	.2003	4.9927	53.3137	.01876	266.178	.003757	2112.13	39.6171	108	
120	.1675	5.9693	55.4985	.01802	331.288	.003019	2359.71	42.5185	120	
180	.06857	14.5844	62.0956	.01610	905.625	.001104	3316.91	53.4161	180	
240	.02806	35.6328	64.7957	.01543	2308.85	.4331-3	3870.69	59.7368	240	
300	.01149	87.0588	65.9009	.01517	5737.25	.1743-3	4163.66	63.1807	300	
360	.004701	212.704	66.3532	.01507	14113.6	.7085-4	4310.72	64.9662	360	
420	.001924	519.682	66.5384	.01503	34578.8	.2892-4	4382.01	65.8569	420	
480	.7876-3	1269.70	66.6142	.01501	84579.8	.1182-4	4415.74	66.2883	480	
540	.3224-3	3102.15	66.6452	.01500	206743	.4837-5	4431.41	66.4925	540	
600	.1319-3	7579.23	66.6579	.01500	505216	.1979-5	4438.58	66.5875	600	

1 3/	<b>4%</b> s	Single		S	eries	Arith Grad 1 3/4%			
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9828 .9659 .9493 .9330 .9169	1.0175 1.0353 1.0534 1.0719 1.0906	.9828 1.9487 2.8980 3.8309 4.7479	1.0175 .5132 .3451 .2610 .2106	1.0000 2.0175 3.0528 4.1062 5.1781	1.0000 .4957 .3276 .2435 .1931	.9659 2.8645 5.6633 9.3310	.4957 .9884 1.4783 1.9653	1 2 3 4 5
6	.9011	1.1097	5.6490	.1770	6.2687	.1595	13.8367	2.4494	6
7	.8856	1.1291	6.5346	.1530	7.3784	.1355	19.1506	2.9306	7
8	.8704	1.1489	7.4051	.1350	8.5075	.1175	25.2435	3.4089	8
9	.8554	1.1690	8.2605	.1211	9.6564	.1036	32.0870	3.8844	9
10	.8407	1.1894	9.1012	.1099	10.8254	.09238	39.6535	4.3569	10
11	.8263	1.2103	9.9275	.1007	12.0148	.08323	47.9162	4.8266	11
12	.8121	1.2314	10.7395	.09311	13.2251	.07561	56.8489	5.2934	12
13	.7981	1.2530	11.5376	.08667	14.4565	.06917	66.4260	5.7573	13
14	.7844	1.2749	12.3220	.08116	15.7095	.06366	76.6227	6.2184	14
15	.7709	1.2972	13.0929	.07638	16.9844	.05888	87.4149	6.6765	15
16	.7576	1.3199	13.8505	.07220	18.2817	.05470	98.7792	7.1318	16
17	.7446	1.3430	14.5951	.06852	19.6016	.05102	110.693	7.5842	17
18	.7318	1.3665	15.3269	.06524	20.9446	.04774	123.133	8.0338	18
19	.7192	1.3904	16.0461	.06232	22.3112	.04482	136.078	8.4805	19
20	.7068	1.4148	16.7529	.05969	23.7016	.04219	149.508	8.9243	20
21	.6947	1.4395	17.4475	.05731	25.1164	.03981	163.401	9.3653	21
22	.6827	1.4647	18.1303	.05516	26.5559	.03766	177.738	9.8034	22
23	.6710	1.4904	18.8012	.05319	28.0207	.03569	192.500	10.2387	23
24	.6594	1.5164	19.4607	.05139	29.5110	.03389	207.667	10.6711	24
25	.6481	1.5430	20.1088	.04973	31.0275	.03223	223.221	11.1007	25
26	.6369	1.5700	20.7457	.04820	32.5704	.03070	239.145	11.5274	26
27	.6260	1.5975	21.3717	.04679	34.1404	.02929	255.421	11.9513	27
28	.6152	1.6254	21.9870	.04548	35.7379	.02798	272.032	12.3724	28
29	.6046	1.6539	22.5916	.04426	37.3633	.02676	288.962	12.7907	29
30	.5942	1.6828	23.1858	.04313	39.0172	.02563	306.195	13.2061	30
36	.5355	1.8674	26.5428	.03768	49.5661	.02018	415.125	15.6399	36
42	.4826	2.0723	29.5678	.03382	61.2724	.01632	531.436	17.9735	42
48	.4349	2.2996	32.2938	.03097	74.2628	.01347	652.605	20.2084	48
54	.3919	2.5519	34.7503	.02878	88.6783	.01128	776.535	22.3461	54
60	.3531	2.8318	36.9640	.02705	104.675	.009553	901.495	24.3885	60
72	.2868	3.4872	40.7564	.02454	142.126	.007036	1149.12	28.1948	72
84	.2329	4.2943	43.8361	.02281	188.245	.005312	1387.16	31.6442	84
96	.1891	5.2882	46.3370	.02158	245.037	.004081	1610.47	34.7556	96
108	.1536	6.5120	48.3679	.02067	314.974	.003175	1816.19	37.5494	108
120	.1247	8.0192	50.0171	.01999	401.096	.002493	2003.03	40.0469	120
180	.04404	22.7089	54.6265	.01831	1240.51	.8061-3	2668.58	48.8513	180
240	.01555	64.3073	56.2543	.01778	3617.56	.2764-3	3001.27	53.3518	240
300	.005491	182.106	56.8291	.01760	10348.9	.9663-4	3153.24	55.4864	300
360	.001939	515.692	57.0320	.01753	29411.0	.3400-4	3219.08	56.4434	360
420	.6848-3	1460.35	57.1037	.01751	83391.2	.1199-4	3246.64	56.8551	420
480	.2418-3	4135.43	57.1290	.01750	236253	.4233-5	3257.88	57.0268	480
540	.8539-4	11710.8	57.1380	.01750	669130	.1494-5	3262.39	57.0967	540
600	.3015-4	33162.8	57.1411	.01750	18950+2	.5277-6	3264.17	57.1248	600

2%	S	Single		S	eries		Arith Grad			
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m	
1 2 3 4 5	.9804 .9612 .9423 .9238 .9057	1.0200 1.0404 1.0612 1.0824 1.1041	.9804 1.9416 2.8839 3.8077 4.7135	1.0200 .5150 .3468 .2626 .2122	1.0000 2.0200 3.0604 4.1216 5.2040	1.0000 .4950 .3268 .2426 .1922	.9612 2.8458 5.6173 9.2403	.4950 .9868 1.4752 1.9604	1 2 3 4 5	
6	.8880	1.1262	5.6014	.1785	6.3081	.1585	13.6801	2.4423	6	
7	.8706	1.1487	6.4720	.1545	7.4343	.1345	18.9035	2.9208	7	
8	.8535	1.1717	7.3255	.1365	8.5830	.1165	24.8779	3.3961	8	
9	.8368	1.1951	8.1622	.1225	9.7546	.1025	31.5720	3.8681	9	
10	.8203	1.2190	8.9826	.1113	10.9497	.09133	38.9551	4.3367	10	
11	.8043	1.2434	9.7868	.1022	12.1687	.08218	46.9977	4.8021	11	
12	.7885	1.2682	10.5753	.09456	13.4121	.07456	55.6712	5.2642	12	
13	.7730	1.2936	11.3484	.08812	14.6803	.06812	64.9475	5.7231	13	
14	.7579	1.3195	12.1062	.08260	15.9739	.06260	74.7999	6.1786	14	
15	.7430	1.3459	12.8493	.07783	17.2934	.05783	85.2021	6.6309	15	
16	.7284	1.3728	13.5777	.07365	18.6393	.05365	96.1288	7.0799	16	
17	.7142	1.4002	14.2919	.06997	20.0121	.04997	107.555	7.5256	17	
18	.7002	1.4282	14.9920	.06670	21.4123	.04670	119.458	7.9681	18	
19	.6864	1.4568	15.6785	.06378	22.8406	.04378	131.814	8.4073	19	
20	.6730	1.4859	16.3514	.06116	24.2974	.04116	144.600	8.8433	20	
21	.6598	1.5157	17.0112	.05878	25.7833	.03878	157.796	9.2760	21	
22	.6468	1.5460	17.6580	.05663	27.2990	.03663	171.379	9.7055	22	
23	.6342	1.5769	18.2922	.05467	28.8450	.03467	185.331	10.1317	23	
24	.6217	1.6084	18.9139	.05287	30.4219	.03287	199.630	10.5547	24	
25	.6095	1.6406	19.5235	.05122	32.0303	.03122	214.259	10.9745	25	
26	.5976	1.6734	20.1210	.04970	33.6709	.02970	229.199	11.3910	26	
27	.5859	1.7069	20.7069	.04829	35.3443	.02829	244.431	11.8043	27	
28	.5744	1.7410	21.2813	.04699	37.0512	.02699	259.939	12.2145	28	
29	.5631	1.7758	21.8444	.04578	38.7922	.02578	275.706	12.6214	29	
30	.5521	1.8114	22.3965	.04465	40.5681	.02465	291.716	13.0251	30	
36	.4902	2.0399	25.4888	.03923	51.9944	.01923	392.040	15.3809	36	
42	.4353	2.2972	28.2348	.03542	64.8622	.01542	497.601	17.6237	42	
48	.3865	2.5871	30.6731	.03260	79.3535	.01260	605.966	19.7556	48	
54	.3432	2.9135	32.8383	.03045	95.6731	.01045	715.181	21.7789	54	
60	.3048	3.2810	34.7609	.02877	114.052	.008768	823.698	23.6961	60	
72	.2403	4.1611	37.9841	.02633	158.057	.006327	1034.06	27.2234	72	
84	.1895	5.2773	40.5255	.02468	213.867	.004676	1230.42	30.3616	84	
96	.1494	6.6929	42.5294	.02351	284.647	.003513	1409.30	33.1370	96	
108	.1178	8.4883	44.1095	.02267	374.413	.002671	1569.30	35.5774	108	
120	.09289	10.7652	45.3554	.02205	488.258	.002048	1710.42	37.7114	120	
180	.02831	35.3208	48.5844	.02058	1716.04	.5827-3	2174.41	44.7554	180	
240	.008629	115.889	49.5686	.02017	5744.44	.1741-3	2374.88	47.9110	240	
300	.002630	380.235	49.8685	.02005	18961.7	.5274-4	2453.98	49.2089	300	
360	.8016-3	1247.56	49.9599	.02002	62328.1	.1604-4	2483.57	49.7112	360	
420	.2443-3	4093.29	49.9878	.02000	204614	.4887-5	2494.26	49.8974	420	
480	.7446-4	13430.2	49.9963	.02000	671460	.1489-5	2498.03	49.9643	480	
540	.2269-4	44064.9	49.9989	.02000	22032+2	.4539-6	2499.33	49.9877	540	
600	.6917-5	144578	49.9997	.02000	72289+2	.1383-6	2499.78	49.9958	600	

<b>2 1/4%</b> Single				Series				Arith Grad 2 1/4%			
m	P F	F P	P A	A P	F A	A F	P G	A G	m		
1 2 3 4 5	.9780 .9565 .9354 .9148 .8947	1.0225 1.0455 1.0690 1.0931 1.1177	.9780 1.9345 2.8699 3.7847 4.6795	1.0225 .5169 .3484 .2642 .2137	1.0000 2.0225 3.0680 4.1370 5.2301	1.0000 .4944 .3259 .2417 .1912	.9565 2.8273 5.5719 9.1507	.4944 .9852 1.4722 1.9555	1 2 3 4 5		
6	.8750	1.1428	5.5545	.1800	6.3478	.1575	13.5258	2.4351	6		
7	.8558	1.1685	6.4102	.1560	7.4906	.1335	18.6604	2.9110	7		
8	.8369	1.1948	7.2472	.1380	8.6592	.1155	24.5190	3.3832	8		
9	.8185	1.2217	8.0657	.1240	9.8540	.1015	31.0672	3.8518	9		
10	.8005	1.2492	8.8662	.1128	11.0757	.09029	38.2718	4.3166	10		
11	.7829	1.2773	9.6491	.1036	12.3249	.08114	46.1007	4.7777	11		
12	.7657	1.3060	10.4148	.09602	13.6022	.07352	54.5231	5.2352	12		
13	.7488	1.3354	11.1636	.08958	14.9083	.06708	63.5089	5.6889	13		
14	.7323	1.3655	11.8959	.08406	16.2437	.06156	73.0293	6.1390	14		
15	.7162	1.3962	12.6122	.07929	17.6092	.05679	83.0565	6.5854	15		
16	.7005	1.4276	13.3126	.07512	19.0054	.05262	93.5635	7.0282	16		
17	.6851	1.4597	13.9977	.07144	20.4330	.04894	104.524	7.4673	17		
18	.6700	1.4926	14.6677	.06818	21.8928	.04568	115.914	7.9027	18		
19	.6552	1.5262	15.3229	.06526	23.3853	.04276	127.708	8.3345	19		
20	.6408	1.5605	15.9637	.06264	24.9115	.04014	139.884	8.7626	20		
21	.6267	1.5956	16.5904	.06028	26.4720	.03778	152.418	9.1871	21		
22	.6129	1.6315	17.2034	.05813	28.0676	.03563	165.289	9.6080	22		
23	.5994	1.6682	17.8028	.05617	29.6992	.03367	178.477	10.0252	23		
24	.5862	1.7058	18.3890	.05438	31.3674	.03188	191.961	10.4389	24		
25	.5733	1.7441	18.9624	.05274	33.0732	.03024	205.721	10.8489	25		
26	.5607	1.7834	19.5231	.05122	34.8173	.02872	219.739	11.2553	26		
27	.5484	1.8235	20.0715	.04982	36.6007	.02732	233.997	11.6582	27		
28	.5363	1.8645	20.6078	.04853	38.4242	.02603	248.478	12.0575	28		
29	.5245	1.9065	21.1323	.04732	40.2888	.02482	263.165	12.4532	29		
30	.5130	1.9494	21.6453	.04620	42.1953	.02370	278.041	12.8453	30		
36	.4489	2.2278	24.4947	.04083	54.5696	.01833	370.460	15.1241	36		
42	.3928	2.5460	26.9879	.03705	68.7113	.01455	466.288	17.2777	42		
48	.3437	2.9096	29.1695	.03428	84.8729	.01178	563.229	19.3088	48		
54	.3007	3.3252	31.0785	.03218	103.343	.009677	659.510	21.2207	54		
60	.2631	3.8001	32.7490	.03054	124.450	.008035	753.780	23.0169	60		
72	.2015	4.9632	35.4896	.02818	176.141	.005677	932.565	26.2772	72		
84	.1543	6.4821	37.5880	.02660	243.651	.004104	1094.64	29.1220	84		
96	.1181	8.4660	39.1947	.02551	331.822	.003014	1238.01	31.5862	96		
108	.09044	11.0570	40.4249	.02474	446.979	.002237	1362.55	33.7057	108		
120	.06925	14.4410	41.3668	.02417	597.379	.001674	1469.21	35.5166	120		
180	.01822	54.8778	43.6346	.02292	2394.57	.4176-3	1793.54	41.1036	180		
240	.004795	208.543	44.2313	.02261	9224.14	.1084-3	1914.69	43.2881	240		
300	.001262	792.492	44.3884	.02253	35177.4	.2843-4	1955.99	44.0654	300		
360	.3321-3	3011.58	44.4297	.02251	133803	.7474-5	1969.34	44.3249	360		
420	.8738-4	11444.4	44.4406	.02250	508596	.1966-5	1973.50	44.4077	420		
480	.2299-4	43490.3	44.4434	.02250	19329+2	.5174-6	1974.77	44.4334	480		
540	.6051-5	165269	44.4442	.02250	73452+2	.1361-6	1975.15	44.4412	540		
600	.1592-5	628044	44.4444	.02250	27913+3	.3583-7	1975.26	44.4435	600		

2 1/2% Single				S	eries		Arith Grad 2 1/2%			
m	P F	F P	P A	A P	F A	A F	P G	A G	m	
1 2 3 4 5	.9756 .9518 .9286 .9060 .8839	1.0250 1.0506 1.0769 1.1038 1.1314	.9756 1.9274 2.8560 3.7620 4.6458	1.0250 .5188 .3501 .2658 .2152	1.0000 2.0250 3.0756 4.1525 5.2563	1.0000 .4938 .3251 .2408 .1902	.9518 2.8090 5.5269 9.0623	.4938 .9835 1.4691 1.9506	1 2 3 4 5	
6	.8623	1.1597	5.5081	.1815	6.3877	.1565	13.3738	2.4280	6	
7	.8413	1.1887	6.3494	.1575	7.5474	.1325	18.4214	2.9013	7	
8	.8207	1.2184	7.1701	.1395	8.7361	.1145	24.1666	3.3704	8	
9	.8007	1.2489	7.9709	.1255	9.9545	.1005	30.5724	3.8355	9	
10	.7812	1.2801	8.7521	.1143	11.2034	.08926	37.6032	4.2965	10	
11	.7621	1.3121	9.5142	.1051	12.4835	.08011	45.2246	4.7534	11	
12	.7436	1.3449	10.2578	.09749	13.7956	.07249	53.4038	5.2062	12	
13	.7254	1.3785	10.9832	.09105	15.1404	.06605	62.1088	5.6549	13	
14	.7077	1.4130	11.6909	.08554	16.5190	.06054	71.3093	6.0995	14	
15	.6905	1.4483	12.3814	.08077	17.9319	.05577	80.9758	6.5401	15	
16	.6736	1.4845	13.0550	.07660	19.3802	.05160	91.0801	6.9766	16	
17	.6572	1.5216	13.7122	.07293	20.8647	.04793	101.595	7.4091	17	
18	.6412	1.5597	14.3534	.06967	22.3863	.04467	112.495	7.8375	18	
19	.6255	1.5987	14.9789	.06676	23.9460	.04176	123.755	8.2619	19	
20	.6103	1.6386	15.5892	.06415	25.5447	.03915	135.350	8.6823	20	
21	.5954	1.6796	16.1845	.06179	27.1833	.03679	147.257	9.0986	21	
22	.5809	1.7216	16.7654	.05965	28.8629	.03465	159.456	9.5110	22	
23	.5667	1.7646	17.3321	.05770	30.5844	.03270	171.923	9.9193	23	
24	.5529	1.8087	17.8850	.05591	32.3490	.03091	184.639	10.3237	24	
25	.5394	1.8539	18.4244	.05428	34.1578	.02928	197.584	10.7241	25	
26	.5262	1.9003	18.9506	.05277	36.0117	.02777	210.740	11.1205	26	
27	.5134	1.9478	19.4640	.05138	37.9120	.02638	224.089	11.5130	27	
28	.5009	1.9965	19.9649	.05009	39.8598	.02509	237.612	11.9015	28	
29	.4887	2.0464	20.4535	.04889	41.8563	.02389	251.295	12.2861	29	
30	.4767	2.0976	20.9303	.04778	43.9027	.02278	265.120	12.6668	30	
36	.4111	2.4325	23.5563	.04245	57.3014	.01745	350.275	14.8697	36	
42	.3545	2.8210	25.8206	.03873	72.8398	.01373	437.290	16.9357	42	
48	.3057	3.2715	27.7732	.03601	90.8596	.01101	524.038	18.8685	48	
54	.2636	3.7939	29.4568	.03395	111.757	.008948	608.942	20.6724	54	
60	.2273	4.3998	30.9087	.03235	135.992	.007353	690.866	22.3518	60	
72	.1690	5.9172	33.2401	.03008	196.689	.005084	842.889	25.3576	72	
84	.1257	7.9580	34.9736	.02859	278.321	.003593	976.729	27.9276	84	
96	.09343	10.7026	36.2626	.02758	388.106	.002577	1091.71	30.1058	96	
108	.06947	14.3939	37.2210	.02687	535.755	.001867	1188.71	31.9366	108	
120	.05166	19.3581	37.9337	.02636	734.326	.001362	1269.39	33.4634	120	
180	.01174	85.1718	39.5304	.02530	3366.87	.2970-3	1496.68	37.8615	180	
240	.002669	374.738	39.8933	.02507	14949.5	.6689-4	1570.11	39.3578	240	
300	.6065-3	1648.77	39.9757	.02502	65910.7	.1517-4	1591.75	39.8179	300	
360	.1379-3	7254.23	39.9945	.02500	290129	.3447-5	1597.79	39.9504	360	
420	.3133-4	31917.1	39.9987	.02500	12766+2	.7833-6	1599.42	39.9868	420	
480	.7121-5	140429	39.9997	.02500	56171+2	.1780-6	1599.85	39.9966	480	
540	.1618-5	617856	39.9999	.02500	24714+3	.4046-7	1599.96	39.9991	540	
600	.3679-6	27184+2	40.0000	.02500	10874+4	.9196-8	1599.99	39.9998	600	

2 3/	4%	Single		S	eries		Arith Grad 2 3/4%			
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m	
1 2 3 4 5	.9732 .9472 .9218 .8972 .8732	1.0275 1.0558 1.0848 1.1146 1.1453	.9732 1.9204 2.8423 3.7394 4.6126	1.0275 .5207 .3518 .2674 .2168	1.0000 2.0275 3.0833 4.1680 5.2827	1.0000 .4932 .3243 .2399 .1893	.9472 2.7909 5.4824 8.9750	.4932 .9819 1.4661 1.9458	1 2 3 4 5	
6	.8498	1.1768	5.4624	.1831	6.4279	.1556	13.2239	2.4209	6	
7	.8270	1.2091	6.2894	.1590	7.6047	.1315	18.1861	2.8916	7	
8	.8049	1.2424	7.0943	.1410	8.8138	.1135	23.8205	3.3577	8	
9	.7834	1.2765	7.8777	.1269	10.0562	.09944	30.0874	3.8193	9	
10	.7624	1.3117	8.6401	.1157	11.3328	.08824	36.9490	4.2765	10	
11	.7420	1.3477	9.3821	.1066	12.6444	.07909	44.3689	4.7291	11	
12	.7221	1.3848	10.1042	.09897	13.9921	.07147	52.3124	5.1773	12	
13	.7028	1.4229	10.8070	.09253	15.3769	.06503	60.7461	5.6210	13	
14	.6840	1.4620	11.4910	.08702	16.7998	.05952	69.6380	6.0602	14	
15	.6657	1.5022	12.1567	.08226	18.2618	.05476	78.9577	6.4950	15	
16	.6479	1.5435	12.8046	.07810	19.7640	.05060	88.6758	6.9253	16	
17	.6305	1.5860	13.4351	.07443	21.3075	.04693	98.7644	7.3512	17	
18	.6137	1.6296	14.0488	.07118	22.8934	.04368	109.197	7.7727	18	
19	.5972	1.6744	14.6460	.06828	24.5230	.04078	119.947	8.1897	19	
20	.5813	1.7204	15.2273	.06567	26.1974	.03817	130.991	8.6024	20	
21	.5657	1.7677	15.7929	.06332	27.9178	.03582	142.304	9.0106	21	
22	.5506	1.8164	16.3435	.06119	29.6856	.03369	153.866	9.4145	22	
23	.5358	1.8663	16.8793	.05924	31.5019	.03174	165.654	9.8140	23	
24	.5215	1.9176	17.4008	.05747	33.3682	.02997	177.648	10.2092	24	
25	.5075	1.9704	17.9083	.05584	35.2858	.02834	189.829	10.6000	25	
26	.4939	2.0245	18.4023	.05434	37.2562	.02684	202.177	10.9865	26	
27	.4807	2.0802	18.8830	.05296	39.2808	.02546	214.676	11.3687	27	
28	.4679	2.1374	19.3508	.05168	41.3610	.02418	227.308	11.7467	28	
29	.4553	2.1962	19.8062	.05049	43.4984	.02299	240.057	12.1203	29	
30	.4431	2.2566	20.2493	.04938	45.6946	.02188	252.908	12.4897	30	
36	.3766	2.6555	22.6699	.04411	60.1999	.01661	331.387	14.6179	36	
42	.3200	3.1249	24.7269	.04044	77.2693	.01294	410.419	16.5981	42	
48	.2719	3.6773	26.4749	.03777	97.3560	.01027	488.067	18.4351	48	
54	.2311	4.3273	27.9604	.03576	120.993	.008265	562.964	20.1344	54	
60	.1964	5.0923	29.2227	.03422	148.809	.006720	634.184	21.7018	60	
72	.1418	7.0517	31.2069	.03204	220.061	.004544	763.511	24.4661	72	
84	.1024	9.7650	32.6398	.03064	318.729	.003137	874.097	26.7801	84	
96	.07395	13.5225	33.6745	.02970	455.362	.002196	966.371	28.6974	96	
108	.05340	18.7257	34.4217	.02905	644.570	.001551	1041.97	30.2708	108	
120	.03856	25.9310	34.9613	.02860	906.583	.001103	1103.04	31.5504	120	
180	.007573	132.047	36.0883	.02771	4765.36	.2098-3	1262.73	34.9901	180	
240	.001487	672.418	36.3096	.02754	24415.2	.4096-4	1307.37	36.0062	240	
300	.2920-3	3424.12	36.3530	.02751	124477	.8034-5	1318.74	36.2760	300	
360	.5735-4	17436.5	36.3616	.02750	634018	.1577-5	1321.49	36.3430	360	
420	.1126-4	88791.0	36.3632	.02750	32287+2	.3097-6	1322.13	36.3589	420	
480	.2212-5	452146	36.3636	.02750	16442+3	.6082-7	1322.27	36.3626	480	
540	.4343-6	23024+2	36.3636	.02750	83725+3	.1194-7	1322.30	36.3634	540	
600	.8529-7	11725+3	36.3636	.02750	42635+4	.2345-8	1322.31	36.3636	600	

3%	;	Single		S	eries		Arith (	3%	
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9709 .9426 .9151 .8885 .8626	1.0300 1.0609 1.0927 1.1255 1.1593	.9709 1.9135 2.8286 3.7171 4.5797	1.0300 .5226 .3535 .2690 .2184	1.0000 2.0300 3.0909 4.1836 5.3091	1.0000 .4926 .3235 .2390 .1884	.9426 2.7729 5.4383 8.8888	.4926 .9803 1.4631 1.9409	1 2 3 4 5
6	.8375	1.1941	5.4172	.1846	6.4684	.1546	13.0762	2.4138	6
7	.8131	1.2299	6.2303	.1605	7.6625	.1305	17.9547	2.8819	7
8	.7894	1.2668	7.0197	.1425	8.8923	.1125	23.4806	3.3450	8
9	.7664	1.3048	7.7861	.1284	10.1591	.09843	29.6119	3.8032	9
10	.7441	1.3439	8.5302	.1172	11.4639	.08723	36.3088	4.2565	10
11	.7224	1.3842	9.2526	.1081	12.8078	.07808	43.5330	4.7049	11
12	.7014	1.4258	9.9540	.1005	14.1920	.07046	51.2482	5.1485	12
13	.6810	1.4685	10.6350	.09403	15.6178	.06403	59.4196	5.5872	13
14	.6611	1.5126	11.2961	.08853	17.0863	.05853	68.0141	6.0210	14
15	.6419	1.5580	11.9379	.08377	18.5989	.05377	77.0002	6.4500	15
16	.6232	1.6047	12.5611	.07961	20.1569	.04961	86.3477	6.8742	16
17	.6050	1.6528	13.1661	.07595	21.7616	.04595	96.0280	7.2936	17
18	.5874	1.7024	13.7535	.07271	23.4144	.04271	106.014	7.7081	18
19	.5703	1.7535	14.3238	.06981	25.1169	.03981	116.279	8.1179	19
20	.5537	1.8061	14.8775	.06722	26.8704	.03722	126.799	8.5229	20
21	.5375	1.8603	15.4150	.06487	28.6765	.03487	137.550	8.9231	21
22	.5219	1.9161	15.9369	.06275	30.5368	.03275	148.509	9.3186	22
23	.5067	1.9736	16.4436	.06081	32.4529	.03081	159.657	9.7093	23
24	.4919	2.0328	16.9355	.05905	34.4265	.02905	170.971	10.0954	24
25	.4776	2.0938	17.4131	.05743	36.4593	.02743	182.434	10.4768	25
26	.4637	2.1566	17.8768	.05594	38.5530	.02594	194.026	10.8535	26
27	.4502	2.2213	18.3270	.05456	40.7096	.02456	205.731	11.2255	27
28	.4371	2.2879	18.7641	.05329	42.9309	.02329	217.532	11.5930	28
29	.4243	2.3566	19.1885	.05211	45.2189	.02211	229.414	11.9558	29
30	.4120	2.4273	19.6004	.05102	47.5754	.02102	241.361	12.3141	30
36	.3450	2.8983	21.8323	.04580	63.2759	.01580	313.703	14.3688	36
42	.2890	3.4607	23.7014	.04219	82.0232	.01219	385.502	16.2650	42
48	.2420	4.1323	25.2667	.03958	104.408	.009578	455.025	18.0089	48
54	.2027	4.9341	26.5777	.03763	131.137	.007626	521.116	19.6073	54
60	.1697	5.8916	27.6756	.03613	163.053	.006133	583.053	21.0674	60
72	.1190	8.4000	29.3651	.03405	246.667	.004054	693.123	23.6036	72
84	.08350	11.9764	30.5501	.03273	365.881	.002733	784.543	25.6806	84
96	.05856	17.0755	31.3812	.03187	535.850	.001866	858.638	27.3615	96
108	.04108	24.3456	31.9642	.03129	778.186	.001285	917.601	28.7072	108
120	.02881	34.7110	32.3730	.03089	1123.70	.8899-3	963.863	29.7737	120
180	.004890	204.503	33.1703	.03015	6783.45	.1474-3	1076.34	32.4488	180
240	.8300-3	1204.85	33.3057	.03002	40128.4	.2492-4	1103.55	33.1340	240
300	.1409-3	7098.51	33.3286	.03000	236584	.4227-5	1109.55	33.2911	300
360	.2391-4	41821.6	33.3325	.03000	13940+2	.7173-6	1110.80	33.3247	360
420	.4059-5	246396	33.3332	.03000	82132+2	.1218-6	1111.05	33.3316	420
480	.6889-6	14517+2	33.3333	.03000	48389+3	.2067-7	1111.10	33.3330	480
540	.1169-6	85527+2	33.3333	.03000	28509+4	.3508-8	1111.11	33.3333	540
600	.1985-7	50389+3	33.3333	.03000	16796+5	.5954-9	1111.11	33.3333	600

4%	S	Single		Se	eries		Arith (	4%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9615 .9246 .8890 .8548 .8219	1.0400 1.0816 1.1249 1.1699 1.2167	.9615 1.8861 2.7751 3.6299 4.4518	1.0400 .5302 .3603 .2755 .2246	1.0000 2.0400 3.1216 4.2465 5.4163	1.0000 .4902 .3203 .2355 .1846	.9246 2.7025 5.2670 8.5547	.4902 .9739 1.4510 1.9216	1 2 3 4 5
6	.7903	1.2653	5.2421	.1908	6.6330	.1508	12.5062	2.3857	6
7	.7599	1.3159	6.0021	.1666	7.8983	.1266	17.0657	2.8433	7
8	.7307	1.3686	6.7327	.1485	9.2142	.1085	22.1806	3.2944	8
9	.7026	1.4233	7.4353	.1345	10.5828	.09449	27.8013	3.7391	9
10	.6756	1.4802	8.1109	.1233	12.0061	.08329	33.8814	4.1773	10
11	.6496	1.5395	8.7605	.1141	13.4864	.07415	40.3772	4.6090	11
12	.6246	1.6010	9.3851	.1066	15.0258	.06655	47.2477	5.0343	12
13	.6006	1.6651	9.9856	.1001	16.6268	.06014	54.4546	5.4533	13
14	.5775	1.7317	10.5631	.09467	18.2919	.05467	61.9618	5.8659	14
15	.5553	1.8009	11.1184	.08994	20.0236	.04994	69.7355	6.2721	15
16	.5339	1.8730	11.6523	.08582	21.8245	.04582	77.7441	6.6720	16
17	.5134	1.9479	12.1657	.08220	23.6975	.04220	85.9581	7.0656	17
18	.4936	2.0258	12.6593	.07899	25.6454	.03899	94.3498	7.4530	18
19	.4746	2.1068	13.1339	.07614	27.6712	.03614	102.893	7.8342	19
20	.4564	2.1911	13.5903	.07358	29.7781	.03358	111.565	8.2091	20
21	.4388	2.2788	14.0292	.07128	31.9692	.03128	120.341	8.5779	21
22	.4220	2.3699	14.4511	.06920	34.2480	.02920	129.202	8.9407	22
23	.4057	2.4647	14.8568	.06731	36.6179	.02731	138.128	9.2973	23
24	.3901	2.5633	15.2470	.06559	39.0826	.02559	147.101	9.6479	24
25	.3751	2.6658	15.6221	.06401	41.6459	.02401	156.104	9.9925	25
26	.3607	2.7725	15.9828	.06257	44.3117	.02257	165.121	10.3312	26
27	.3468	2.8834	16.3296	.06124	47.0842	.02124	174.138	10.6640	27
28	.3335	2.9987	16.6631	.06001	49.9676	.02001	183.142	10.9909	28
29	.3207	3.1187	16.9837	.05888	52.9663	.01888	192.121	11.3120	29
30	.3083	3.2434	17.2920	.05783	56.0849	.01783	201.062	11.6274	30
31	.2965	3.3731	17.5885	.05686	59.3283	.01686	209.956	11.9371	31
32	.2851	3.5081	17.8736	.05595	62.7015	.01595	218.792	12.2411	32
33	.2741	3.6484	18.1476	.05510	66.2095	.01510	227.563	12.5396	33
34	.2636	3.7943	18.4112	.05431	69.8579	.01431	236.261	12.8324	34
35	.2534	3.9461	18.6646	.05358	73.6522	.01358	244.877	13.1198	35
36	.2437	4.1039	18.9083	.05289	77.5983	.01289	253.405	13.4018	36
37	.2343	4.2681	19.1426	.05224	81.7022	.01224	261.840	13.6784	37
38	.2253	4.4388	19.3679	.05163	85.9703	.01163	270.175	13.9497	38
39	.2166	4.6164	19.5845	.05106	90.4091	.01106	278.407	14.2157	39
40	.2083	4.8010	19.7928	.05052	95.0255	.01052	286.530	14.4765	40
45	.1712	5.8412	20.7200	.04826	121.029	.008262	325.403	15.7047	45
50	.1407	7.1067	21.4822	.04655	152.667	.006550	361.164	16.8122	50
55	.1157	8.6464	22.1086	.04523	191.159	.005231	393.689	17.8070	55
60	.09506	10.5196	22.6235	.04420	237.991	.004202	422.997	18.6972	60
65	.07813	12.7987	23.0467	.04339	294.968	.003390	449.201	19.4909	65
70	.06422	15.5716	23.3945	.04275	364.290	.002745	472.479	20.1961	70
75	.05278	18.9453	23.6804	.04223	448.631	.002229	493.041	20.8206	75
100	.01980	50.5049	24.5050	.04081	1237.62	.8080-3	563.125	22.9800	100

5%	S	Single		Se	eries		Arith (	5%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9524 .9070 .8638 .8227 .7835	1.0500 1.1025 1.1576 1.2155 1.2763	.9524 1.8594 2.7232 3.5460 4.3295	1.0500 .5378 .3672 .2820 .2310	1.0000 2.0500 3.1525 4.3101 5.5256	1.0000 .4878 .3172 .2320 .1810	.9070 2.6347 5.1028 8.2369	.4878 .9675 1.4391 1.9025	1 2 3 4 5
6	.7462	1.3401	5.0757	.1970	6.8019	.1470	11.9680	2.3579	6
7	.7107	1.4071	5.7864	.1728	8.1420	.1228	16.2321	2.8052	7
8	.6768	1.4775	6.4632	.1547	9.5491	.1047	20.9700	3.2445	8
9	.6446	1.5513	7.1078	.1407	11.0266	.09069	26.1268	3.6758	9
10	.6139	1.6289	7.7217	.1295	12.5779	.07950	31.6520	4.0991	10
11	.5847	1.7103	8.3064	.1204	14.2068	.07039	37.4988	4.5144	11
12	.5568	1.7959	8.8633	.1128	15.9171	.06283	43.6241	4.9219	12
13	.5303	1.8856	9.3936	.1065	17.7130	.05646	49.9879	5.3215	13
14	.5051	1.9799	9.8986	.1010	19.5986	.05102	56.5538	5.7133	14
15	.4810	2.0789	10.3797	.09634	21.5786	.04634	63.2880	6.0973	15
16	.4581	2.1829	10.8378	.09227	23.6575	.04227	70.1597	6.4736	16
17	.4363	2.2920	11.2741	.08870	25.8404	.03870	77.1405	6.8423	17
18	.4155	2.4066	11.6896	.08555	28.1324	.03555	84.2043	7.2034	18
19	.3957	2.5270	12.0853	.08275	30.5390	.03275	91.3275	7.5569	19
20	.3769	2.6533	12.4622	.08024	33.0660	.03024	98.4884	7.9030	20
21	.3589	2.7860	12.8212	.07800	35.7193	.02800	105.667	8.2416	21
22	.3418	2.9253	13.1630	.07597	38.5052	.02597	112.846	8.5730	22
23	.3256	3.0715	13.4886	.07414	41.4305	.02414	120.009	8.8971	23
24	.3101	3.2251	13.7986	.07247	44.5020	.02247	127.140	9.2140	24
25	.2953	3.3864	14.0939	.07095	47.7271	.02095	134.228	9.5238	25
26	.2812	3.5557	14.3752	.06956	51.1135	.01956	141.259	9.8266	26
27	.2678	3.7335	14.6430	.06829	54.6691	.01829	148.223	10.1224	27
28	.2551	3.9201	14.8981	.06712	58.4026	.01712	155.110	10.4114	28
29	.2429	4.1161	15.1411	.06605	62.3227	.01605	161.913	10.6936	29
30	.2314	4.3219	15.3725	.06505	66.4388	.01505	168.623	10.9691	30
31	.2204	4.5380	15.5928	.06413	70.7608	.01413	175.233	11.2381	31
32	.2099	4.7649	15.8027	.06328	75.2988	.01328	181.739	11.5005	32
33	.1999	5.0032	16.0025	.06249	80.0638	.01249	188.135	11.7566	33
34	.1904	5.2533	16.1929	.06176	85.0670	.01176	194.417	12.0063	34
35	.1813	5.5160	16.3742	.06107	90.3203	.01107	200.581	12.2498	35
36	.1727	5.7918	16.5469	.06043	95.8363	.01043	206.624	12.4872	36
37	.1644	6.0814	16.7113	.05984	101.628	.009840	212.543	12.7186	37
38	.1566	6.3855	16.8679	.05928	107.710	.009284	218.338	12.9440	38
39	.1491	6.7048	17.0170	.05876	114.095	.008765	224.005	13.1636	39
40	.1420	7.0400	17.1591	.05828	120.800	.008278	229.545	13.3775	40
45	.1113	8.9850	17.7741	.05626	159.700	.006262	255.315	14.3644	45
50	.08720	11.4674	18.2559	.05478	209.348	.004777	277.915	15.2233	50
55	.06833	14.6356	18.6335	.05367	272.713	.003667	297.510	15.9664	55
60	.05354	18.6792	18.9293	.05283	353.584	.002828	314.343	16.6062	60
65	.04195	23.8399	19.1611	.05219	456.798	.002189	328.691	17.1541	65
70	.03287	30.4264	19.3427	.05170	588.529	.001699	340.841	17.6212	70
75	.02575	38.8327	19.4850	.05132	756.654	.001322	351.072	18.0176	75
100	.007604	131.501	19.8479	.05038	2610.03	.3831-3	381.749	19.2337	100

6%	S	Single		Se	eries		Arith (	6%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9434 .8900 .8396 .7921 .7473	1.0600 1.1236 1.1910 1.2625 1.3382	.9434 1.8334 2.6730 3.4651 4.2124	1.0600 .5454 .3741 .2886 .2374	1.0000 2.0600 3.1836 4.3746 5.6371	1.0000 .4854 .3141 .2286 .1774	.8900 2.5692 4.9455 7.9345	.4854 .9612 1.4272 1.8836	1 2 3 4 5
6	.7050	1.4185	4.9173	.2034	6.9753	.1434	11.4594	2.3304	6
7	.6651	1.5036	5.5824	.1791	8.3938	.1191	15.4497	2.7676	7
8	.6274	1.5938	6.2098	.1610	9.8975	.1010	19.8416	3.1952	8
9	.5919	1.6895	6.8017	.1470	11.4913	.08702	24.5768	3.6133	9
10	.5584	1.7908	7.3601	.1359	13.1808	.07587	29.6023	4.0220	10
11	.5268	1.8983	7.8869	.1268	14.9716	.06679	34.8702	4.4213	11
12	.4970	2.0122	8.3838	.1193	16.8699	.05928	40.3369	4.8113	12
13	.4688	2.1329	8.8527	.1130	18.8821	.05296	45.9629	5.1920	13
14	.4423	2.2609	9.2950	.1076	21.0151	.04758	51.7128	5.5635	14
15	.4173	2.3966	9.7122	.1030	23.2760	.04296	57.5546	5.9260	15
16	.3936	2.5404	10.1059	.09895	25.6725	.03895	63.4592	6.2794	16
17	.3714	2.6928	10.4773	.09544	28.2129	.03544	69.4011	6.6240	17
18	.3503	2.8543	10.8276	.09236	30.9057	.03236	75.3569	6.9597	18
19	.3305	3.0256	11.1581	.08962	33.7600	.02962	81.3062	7.2867	19
20	.3118	3.2071	11.4699	.08718	36.7856	.02718	87.2304	7.6051	20
21	.2942	3.3996	11.7641	.08500	39.9927	.02500	93.1136	7.9151	21
22	.2775	3.6035	12.0416	.08305	43.3923	.02305	98.9412	8.2166	22
23	.2618	3.8197	12.3034	.08128	46.9958	.02128	104.701	8.5099	23
24	.2470	4.0489	12.5504	.07968	50.8156	.01968	110.381	8.7951	24
25	.2330	4.2919	12.7834	.07823	54.8645	.01823	115.973	9.0722	25
26	.2198	4.5494	13.0032	.07690	59.1564	.01690	121.468	9.3414	26
27	.2074	4.8223	13.2105	.07570	63.7058	.01570	126.860	9.6029	27
28	.1956	5.1117	13.4062	.07459	68.5281	.01459	132.142	9.8568	28
29	.1846	5.4184	13.5907	.07358	73.6398	.01358	137.310	10.1032	29
30	.1741	5.7435	13.7648	.07265	79.0582	.01265	142.359	10.3422	30
31	.1643	6.0881	13.9291	.07179	84.8017	.01179	147.286	10.5740	31
32	.1550	6.4534	14.0840	.07100	90.8898	.01100	152.090	10.7988	32
33	.1462	6.8406	14.2302	.07027	97.3432	.01027	156.768	11.0166	33
34	.1379	7.2510	14.3681	.06960	104.184	.009598	161.319	11.2276	34
35	.1301	7.6861	14.4982	.06897	111.435	.008974	165.743	11.4319	35
36	.1227	8.1473	14.6210	.06839	119.121	.008395	170.039	11.6298	36
37	.1158	8.6361	14.7368	.06786	127.268	.007857	174.207	11.8213	37
38	.1092	9.1543	14.8460	.06736	135.904	.007358	178.249	12.0065	38
39	.1031	9.7035	14.9491	.06689	145.058	.006894	182.165	12.1857	39
40	.09722	10.2857	15.0463	.06646	154.762	.006462	185.957	12.3590	40
45	.07265	13.7646	15.4558	.06470	212.744	.004700	203.110	13.1413	45
50	.05429	18.4202	15.7619	.06344	290.336	.003444	217.457	13.7964	50
55	.04057	24.6503	15.9905	.06254	394.172	.002537	229.322	14.3411	55
60	.03031	32.9877	16.1614	.06188	533.128	.001876	239.043	14.7909	60
65	.02265	44.1450	16.2891	.06139	719.083	.001391	246.945	15.1601	65
70	.01693	59.0759	16.3845	.06103	967.932	.001033	253.327	15.4613	70
75	.01265	79.0569	16.4558	.06077	1300.95	.7687-3	258.453	15.7058	75
100	.002947	339.302	16.6175	.06018	5638.37	.1774-3	272.047	16.3711	100

7%	S	Single		Se	eries		Arith (	7%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9346 .8734 .8163 .7629 .7130	1.0700 1.1449 1.2250 1.3108 1.4026	.9346 1.8080 2.6243 3.3872 4.1002	1.0700 .5531 .3811 .2952 .2439	1.0000 2.0700 3.2149 4.4399 5.7507	1.0000 .4831 .3111 .2252 .1739	.8734 2.5060 4.7947 7.6467	.4831 .9549 1.4155 1.8650	1 2 3 4 5
6	.6663	1.5007	4.7665	.2098	7.1533	.1398	10.9784	2.3032	6
7	.6227	1.6058	5.3893	.1856	8.6540	.1156	14.7149	2.7304	7
8	.5820	1.7182	5.9713	.1675	10.2598	.09747	18.7889	3.1465	8
9	.5439	1.8385	6.5152	.1535	11.9780	.08349	23.1404	3.5517	9
10	.5083	1.9672	7.0236	.1424	13.8164	.07238	27.7156	3.9461	10
11	.4751	2.1049	7.4987	.1334	15.7836	.06336	32.4665	4.3296	11
12	.4440	2.2522	7.9427	.1259	17.8885	.05590	37.3506	4.7025	12
13	.4150	2.4098	8.3577	.1197	20.1406	.04965	42.3302	5.0648	13
14	.3878	2.5785	8.7455	.1143	22.5505	.04434	47.3718	5.4167	14
15	.3624	2.7590	9.1079	.1098	25.1290	.03979	52.4461	5.7583	15
16	.3387	2.9522	9.4466	.1059	27.8881	.03586	57.5271	6.0897	16
17	.3166	3.1588	9.7632	.1024	30.8402	.03243	62.5923	6.4110	17
18	.2959	3.3799	10.0591	.09941	33.9990	.02941	67.6219	6.7225	18
19	.2765	3.6165	10.3356	.09675	37.3790	.02675	72.5991	7.0242	19
20	.2584	3.8697	10.5940	.09439	40.9955	.02439	77.5091	7.3163	20
21	.2415	4.1406	10.8355	.09229	44.8652	.02229	82.3393	7.5990	21
22	.2257	4.4304	11.0612	.09041	49.0057	.02041	87.0793	7.8725	22
23	.2109	4.7405	11.2722	.08871	53.4361	.01871	91.7201	8.1369	23
24	.1971	5.0724	11.4693	.08719	58.1767	.01719	96.2545	8.3923	24
25	.1842	5.4274	11.6536	.08581	63.2490	.01581	100.676	8.6391	25
26	.1722	5.8074	11.8258	.08456	68.6765	.01456	104.981	8.8773	26
27	.1609	6.2139	11.9867	.08343	74.4838	.01343	109.166	9.1072	27
28	.1504	6.6488	12.1371	.08239	80.6977	.01239	113.226	9.3289	28
29	.1406	7.1143	12.2777	.08145	87.3465	.01145	117.162	9.5427	29
30	.1314	7.6123	12.4090	.08059	94.4608	.01059	120.972	9.7487	30
31 32 33 34 35	.1228 .1147 .1072 .1002 .09366	8.1451 8.7153 9.3253 9.9781 10.6766	12.5318 12.6466 12.7538 12.8540 12.9477	.07980 .07907 .07841 .07780 .07723	102.073 110.218 118.933 128.259 138.237	.009797 .009073 .008408 .007797	124.655 128.212 131.643 134.951 138.135	9.9471 10.1381 10.3219 10.4987 10.6687	31 32 33 34 35
36	.08754	11.4239	13.0352	.07672	148.913	.006715	141.199	10.8321	36
37	.08181	12.2236	13.1170	.07624	160.337	.006237	144.144	10.9891	37
38	.07646	13.0793	13.1935	.07580	172.561	.005795	146.973	11.1398	38
39	.07146	13.9948	13.2649	.07539	185.640	.005387	149.688	11.2845	39
40	.06678	14.9745	13.3317	.07501	199.635	.005009	152.293	11.4233	40
45	.04761	21.0025	13.6055	.07350	285.749	.003500	163.756	12.0360	45
50	.03395	29.4570	13.8007	.07246	406.529	.002460	172.905	12.5287	50
55	.02420	41.3150	13.9399	.07174	575.929	.001736	180.124	12.9215	55
60	.01726	57.9464	14.0392	.07123	813.520	.001229	185.768	13.2321	60
65	.01230	81.2729	14.1099	.07087	1146.76	.8720-3	190.145	13.4760	65
70	.008773	113.989	14.1604	.07062	1614.13	.6195-3	193.519	13.6662	70
75	.006255	159.876	14.1964	.07044	2269.66	.4406-3	196.104	13.8136	75
100	.001152	867.716	14.2693	.07008	12381.7	.8076-4	202.200	14.1703	100

8%	S	Single		Se	eries		Arith (	8%	
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9259 .8573 .7938 .7350 .6806	1.0800 1.1664 1.2597 1.3605 1.4693	.9259 1.7833 2.5771 3.3121 3.9927	1.0800 .5608 .3880 .3019 .2505	1.0000 2.0800 3.2464 4.5061 5.8666	1.0000 .4808 .3080 .2219 .1705	.8573 2.4450 4.6501 7.3724	.4808 .9487 1.4040 1.8465	1 2 3 4 5
6	.6302	1.5869	4.6229	.2163	7.3359	.1363	10.5233	2.2763	6
7	.5835	1.7138	5.2064	.1921	8.9228	.1121	14.0242	2.6937	7
8	.5403	1.8509	5.7466	.1740	10.6366	.09401	17.8061	3.0985	8
9	.5002	1.9990	6.2469	.1601	12.4876	.08008	21.8081	3.4910	9
10	.4632	2.1589	6.7101	.1490	14.4866	.06903	25.9768	3.8713	10
11	.4289	2.3316	7.1390	.1401	16.6455	.06008	30.2657	4.2395	11
12	.3971	2.5182	7.5361	.1327	18.9771	.05270	34.6339	4.5957	12
13	.3677	2.7196	7.9038	.1265	21.4953	.04652	39.0463	4.9402	13
14	.3405	2.9372	8.2442	.1213	24.2149	.04130	43.4723	5.2731	14
15	.3152	3.1722	8.5595	.1168	27.1521	.03683	47.8857	5.5945	15
16	.2919	3.4259	8.8514	.1130	30.3243	.03298	52.2640	5.9046	16
17	.2703	3.7000	9.1216	.1096	33.7502	.02963	56.5883	6.2037	17
18	.2502	3.9960	9.3719	.1067	37.4502	.02670	60.8426	6.4920	18
19	.2317	4.3157	9.6036	.1041	41.4463	.02413	65.0134	6.7697	19
20	.2145	4.6610	9.8181	.1019	45.7620	.02185	69.0898	7.0369	20
21	.1987	5.0338	10.0168	.09983	50.4229	.01983	73.0629	7.2940	21
22	.1839	5.4365	10.2007	.09803	55.4568	.01803	76.9257	7.5412	22
23	.1703	5.8715	10.3711	.09642	60.8933	.01642	80.6726	7.7786	23
24	.1577	6.3412	10.5288	.09498	66.7648	.01498	84.2997	8.0066	24
25	.1460	6.8485	10.6748	.09368	73.1059	.01368	87.8041	8.2254	25
26	.1352	7.3964	10.8100	.09251	79.9544	.01251	91.1842	8.4352	26
27	.1252	7.9881	10.9352	.09145	87.3508	.01145	94.4390	8.6363	27
28	.1159	8.6271	11.0511	.09049	95.3388	.01049	97.5687	8.8289	28
29	.1073	9.3173	11.1584	.08962	103.966	.009619	100.574	9.0133	29
30	.09938	10.0627	11.2578	.08883	113.283	.008827	103.456	9.1897	30
31	.09202	10.8677	11.3498	.08811	123.346	.008107	106.216	9.3584	31
32	.08520	11.7371	11.4350	.08745	134.214	.007451	108.857	9.5197	32
33	.07889	12.6760	11.5139	.08685	145.951	.006852	111.382	9.6737	33
34	.07305	13.6901	11.5869	.08630	158.627	.006304	113.792	9.8208	34
35	.06763	14.7853	11.6546	.08580	172.317	.005803	116.092	9.9611	35
36	.06262	15.9682	11.7172	.08534	187.102	.005345	118.284	10.0949	36
37	.05799	17.2456	11.7752	.08492	203.070	.004924	120.371	10.2225	37
38	.05369	18.6253	11.8289	.08454	220.316	.004539	122.358	10.3440	38
39	.04971	20.1153	11.8786	.08419	238.941	.004185	124.247	10.4597	39
40	.04603	21.7245	11.9246	.08386	259.057	.003860	126.042	10.5699	40
45	.03133	31.9204	12.1084	.08259	386.506	.002587	133.733	11.0447	45
50	.02132	46.9016	12.2335	.08174	573.770	.001743	139.593	11.4107	50
55	.01451	68.9139	12.3186	.08118	848.923	.001178	144.006	11.6902	55
60	.009876	101.257	12.3766	.08080	1253.21	.7979-3	147.300	11.9015	60
65	.006721	148.780	12.4160	.08054	1847.25	.5413-3	149.739	12.0602	65
70	.004574	218.606	12.4428	.08037	2720.08	.3676-3	151.533	12.1783	70
75	.003113	321.205	12.4611	.08025	4002.56	.2498-3	152.845	12.2658	75
100	.4546-3	2199.76	12.4943	.08004	27484.5	.3638-4	155.611	12.4545	100

9%	S	Single		Se	eries		Arith (	9%	
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.9174 .8417 .7722 .7084 .6499	1.0900 1.1881 1.2950 1.4116 1.5386	.9174 1.7591 2.5313 3.2397 3.8897	1.0900 .5685 .3951 .3087 .2571	1.0000 2.0900 3.2781 4.5731 5.9847	1.0000 .4785 .3051 .2187 .1671	.8417 2.3860 4.5113 7.1110	.4785 .9426 1.3925 1.8282	1 2 3 4 5
6	.5963	1.6771	4.4859	.2229	7.5233	.1329	10.0924	2.2498	6
7	.5470	1.8280	5.0330	.1987	9.2004	.1087	13.3746	2.6574	7
8	.5019	1.9926	5.5348	.1807	11.0285	.09067	16.8877	3.0512	8
9	.4604	2.1719	5.9952	.1668	13.0210	.07680	20.5711	3.4312	9
10	.4224	2.3674	6.4177	.1558	15.1929	.06582	24.3728	3.7978	10
11	.3875	2.5804	6.8052	.1469	17.5603	.05695	28.2481	4.1510	11
12	.3555	2.8127	7.1607	.1397	20.1407	.04965	32.1590	4.4910	12
13	.3262	3.0658	7.4869	.1336	22.9534	.04357	36.0731	4.8182	13
14	.2992	3.3417	7.7862	.1284	26.0192	.03843	39.9633	5.1326	14
15	.2745	3.6425	8.0607	.1241	29.3609	.03406	43.8069	5.4346	15
16	.2519	3.9703	8.3126	.1203	33.0034	.03030	47.5849	5.7245	16
17	.2311	4.3276	8.5436	.1170	36.9737	.02705	51.2821	6.0024	17
18	.2120	4.7171	8.7556	.1142	41.3013	.02421	54.8860	6.2687	18
19	.1945	5.1417	8.9501	.1117	46.0185	.02173	58.3868	6.5236	19
20	.1784	5.6044	9.1285	.1095	51.1601	.01955	61.7770	6.7674	20
21	.1637	6.1088	9.2922	.1076	56.7645	.01762	65.0509	7.0006	21
22	.1502	6.6586	9.4424	.1059	62.8733	.01590	68.2048	7.2232	22
23	.1378	7.2579	9.5802	.1044	69.5319	.01438	71.2359	7.4357	23
24	.1264	7.9111	9.7066	.1030	76.7898	.01302	74.1433	7.6384	24
25	.1160	8.6231	9.8226	.1018	84.7009	.01181	76.9265	7.8316	25
26	.1064	9.3992	9.9290	.1007	93.3240	.01072	79.5863	8.0156	26
27	.09761	10.2451	10.0266	.09973	102.723	.009735	82.1241	8.1906	27
28	.08955	11.1671	10.1161	.09885	112.968	.008852	84.5419	8.3571	28
29	.08215	12.1722	10.1983	.09806	124.135	.008056	86.8422	8.5154	29
30	.07537	13.2677	10.2737	.09734	136.308	.007336	89.0280	8.6657	30
31	.06915	14.4618	10.3428	.09669	149.575	.006686	91.1024	8.8083	31
32	.06344	15.7633	10.4062	.09610	164.037	.006096	93.0690	8.9436	32
33	.05820	17.1820	10.4644	.09556	179.800	.005562	94.9314	9.0718	33
34	.05339	18.7284	10.5178	.09508	196.982	.005077	96.6935	9.1933	34
35	.04899	20.4140	10.5668	.09464	215.711	.004636	98.3590	9.3083	35
36	.04494	22.2512	10.6118	.09424	236.125	.004235	99.9319	9.4171	36
37	.04123	24.2538	10.6530	.09387	258.376	.003870	101.416	9.5200	37
38	.03783	26.4367	10.6908	.09354	282.630	.003538	102.816	9.6172	38
39	.03470	28.8160	10.7255	.09324	309.066	.003236	104.135	9.7090	39
40	.03184	31.4094	10.7574	.09296	337.882	.002960	105.376	9.7957	40
45	.02069	48.3273	10.8812	.09190	525.859	.001902	110.556	10.1603	45
50	.01345	74.3575	10.9617	.09123	815.084	.001227	114.325	10.4295	50
55	.008741	114.408	11.0140	.09079	1260.09	.7936-3	117.036	10.6261	55
60	.005681	176.031	11.0480	.09051	1944.79	.5142-3	118.968	10.7683	60
65	.003692	270.846	11.0701	.09033	2998.29	.3335-3	120.334	10.8702	65
70	.002400	416.730	11.0844	.09022	4619.22	.2165-3	121.294	10.9427	70
75	.001560	641.191	11.0938	.09014	7113.23	.1406-3	121.965	10.9940	75
100	.1809-3	5529.04	11.1091	.09002	61422.7	.1628-4	123.234	11.0930	100

10%		Single		Se	eries		Arith Grad		10%
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9091 .8264 .7513 .6830 .6209	1.1000 1.2100 1.3310 1.4641 1.6105	.9091 1.7355 2.4869 3.1699 3.7908	1.1000 .5762 .4021 .3155 .2638	1.0000 2.1000 3.3100 4.6410 6.1051	1.0000 .4762 .3021 .2155 .1638	.8264 2.3291 4.3781 6.8618	.4762 .9366 1.3812 1.8101	1 2 3 4 5
6	.5645	1.7716	4.3553	.2296	7.7156	.1296	9.6842	2.2236	6
7	.5132	1.9487	4.8684	.2054	9.4872	.1054	12.7631	2.6216	7
8	.4665	2.1436	5.3349	.1874	11.4359	.08744	16.0287	3.0045	8
9	.4241	2.3579	5.7590	.1736	13.5795	.07364	19.4215	3.3724	9
10	.3855	2.5937	6.1446	.1627	15.9374	.06275	22.8913	3.7255	10
11	.3505	2.8531	6.4951	.1540	18.5312	.05396	26.3963	4.0641	11
12	.3186	3.1384	6.8137	.1468	21.3843	.04676	29.9012	4.3884	12
13	.2897	3.4523	7.1034	.1408	24.5227	.04078	33.3772	4.6988	13
14	.2633	3.7975	7.3667	.1357	27.9750	.03575	36.8005	4.9955	14
15	.2394	4.1772	7.6061	.1315	31.7725	.03147	40.1520	5.2789	15
16	.2176	4.5950	7.8237	.1278	35.9497	.02782	43.4164	5.5493	16
17	.1978	5.0545	8.0216	.1247	40.5447	.02466	46.5819	5.8071	17
18	.1799	5.5599	8.2014	.1219	45.5992	.02193	49.6395	6.0526	18
19	.1635	6.1159	8.3649	.1195	51.1591	.01955	52.5827	6.2861	19
20	.1486	6.7275	8.5136	.1175	57.2750	.01746	55.4069	6.5081	20
21	.1351	7.4002	8.6487	.1156	64.0025	.01562	58.1095	6.7189	21
22	.1228	8.1403	8.7715	.1140	71.4027	.01401	60.6893	6.9189	22
23	.1117	8.9543	8.8832	.1126	79.5430	.01257	63.1462	7.1085	23
24	.1015	9.8497	8.9847	.1113	88.4973	.01130	65.4813	7.2881	24
25	.09230	10.8347	9.0770	.1102	98.3471	.01017	67.6964	7.4580	25
26	.08391	11.9182	9.1609	.1092	109.182	.009159	69.7940	7.6186	26
27	.07628	13.1100	9.2372	.1083	121.100	.008258	71.7773	7.7704	27
28	.06934	14.4210	9.3066	.1075	134.210	.007451	73.6495	7.9137	28
29	.06304	15.8631	9.3696	.1067	148.631	.006728	75.4146	8.0489	29
30	.05731	17.4494	9.4269	.1061	164.494	.006079	77.0766	8.1762	30
31	.05210	19.1943	9.4790	.1055	181.943	.005496	78.6395	8.2962	31
32	.04736	21.1138	9.5264	.1050	201.138	.004972	80.1078	8.4091	32
33	.04306	23.2252	9.5694	.1045	222.252	.004499	81.4856	8.5152	33
34	.03914	25.5477	9.6086	.1041	245.477	.004074	82.7773	8.6149	34
35	.03558	28.1024	9.6442	.1037	271.024	.003690	83.9872	8.7086	35
36	.03235	30.9127	9.6765	.1033	299.127	.003343	85.1194	8.7965	36
37	.02941	34.0039	9.7059	.1030	330.039	.003030	86.1781	8.8789	37
38	.02673	37.4043	9.7327	.1027	364.043	.002747	87.1673	8.9562	38
39	.02430	41.1448	9.7570	.1025	401.448	.002491	88.0908	9.0285	39
40	.02209	45.2593	9.7791	.1023	442.593	.002259	88.9525	9.0962	40
45	.01372	72.8905	9.8628	.1014	718.905	.001391	92.4544	9.3740	45
50	.008519	117.391	9.9148	.1009	1163.91	.8592-3	94.8889	9.5704	50
55	.005289	189.059	9.9471	.1005	1880.59	.5317-3	96.5619	9.7075	55
60	.003284	304.482	9.9672	.1003	3034.82	.3295-3	97.7010	9.8023	60
65	.002039	490.371	9.9796	.1002	4893.71	.2043-3	98.4705	9.8672	65
70	.001266	789.747	9.9873	.1001	7887.47	.1268-3	98.9870	9.9113	70
75	.7862-3	1271.90	9.9921	.1001	12709.0	.7868-4	99.3317	9.9410	75
100	.7257-4	13780.6	9.9993	.1000	137796	.7257-5	99.9202	9.9927	100

11%		Single Series					Arith Grad 1		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.9009 .8116 .7312 .6587 .5935	1.1100 1.2321 1.3676 1.5181 1.6851	.9009 1.7125 2.4437 3.1024 3.6959	1.1100 .5839 .4092 .3223 .2706	1.0000 2.1100 3.3421 4.7097 6.2278	1.0000 .4739 .2992 .2123 .1606	.8116 2.2740 4.2502 6.6240	.4739 .9306 1.3700 1.7923	1 2 3 4 5
6	.5346	1.8704	4.2305	.2364	7.9129	.1264	9.2972	2.1976	6
7	.4817	2.0762	4.7122	.2122	9.7833	.1022	12.1872	2.5863	7
8	.4339	2.3045	5.1461	.1943	11.8594	.08432	15.2246	2.9585	8
9	.3909	2.5580	5.5370	.1806	14.1640	.07060	18.3520	3.3144	9
10	.3522	2.8394	5.8892	.1698	16.7220	.05980	21.5217	3.6544	10
11	.3173	3.1518	6.2065	.1611	19.5614	.05112	24.6945	3.9788	11
12	.2858	3.4985	6.4924	.1540	22.7132	.04403	27.8388	4.2879	12
13	.2575	3.8833	6.7499	.1482	26.2116	.03815	30.9290	4.5822	13
14	.2320	4.3104	6.9819	.1432	30.0949	.03323	33.9449	4.8619	14
15	.2090	4.7846	7.1909	.1391	34.4054	.02907	36.8709	5.1275	15
16	.1883	5.3109	7.3792	.1355	39.1899	.02552	39.6953	5.3794	16
17	.1696	5.8951	7.5488	.1325	44.5008	.02247	42.4095	5.6180	17
18	.1528	6.5436	7.7016	.1298	50.3959	.01984	45.0074	5.8439	18
19	.1377	7.2633	7.8393	.1276	56.9395	.01756	47.4856	6.0574	19
20	.1240	8.0623	7.9633	.1256	64.2028	.01558	49.8423	6.2590	20
21	.1117	8.9492	8.0751	.1238	72.2651	.01384	52.0771	6.4491	21
22	.1007	9.9336	8.1757	.1223	81.2143	.01231	54.1912	6.6283	22
23	.09069	11.0263	8.2664	.1210	91.1479	.01097	56.1864	6.7969	23
24	.08170	12.2392	8.3481	.1198	102.174	.009787	58.0656	6.9555	24
25	.07361	13.5855	8.4217	.1187	114.413	.008740	59.8322	7.1045	25
26	.06631	15.0799	8.4881	.1178	127.999	.007813	61.4900	7.2443	26
27	.05974	16.7386	8.5478	.1170	143.079	.006989	63.0433	7.3754	27
28	.05382	18.5799	8.6016	.1163	159.817	.006257	64.4965	7.4982	28
29	.04849	20.6237	8.6501	.1156	178.397	.005605	65.8542	7.6131	29
30	.04368	22.8923	8.6938	.1150	199.021	.005025	67.1210	7.7206	30
31	.03935	25.4104	8.7331	.1145	221.913	.004506	68.3016	7.8210	31
32	.03545	28.2056	8.7686	.1140	247.324	.004043	69.4007	7.9147	32
33	.03194	31.3082	8.8005	.1136	275.529	.003629	70.4228	8.0021	33
34	.02878	34.7521	8.8293	.1133	306.837	.003259	71.3724	8.0836	34
35	.02592	38.5749	8.8552	.1129	341.590	.002927	72.2538	8.1594	35
36	.02335	42.8181	8.8786	.1126	380.164	.002630	73.0712	8.2300	36
37	.02104	47.5281	8.8996	.1124	422.982	.002364	73.8286	8.2957	37
38	.01896	52.7562	8.9186	.1121	470.511	.002125	74.5300	8.3567	38
39	.01708	58.5593	8.9357	.1119	523.267	.001911	75.1789	8.4133	39
40	.01538	65.0009	8.9511	.1117	581.826	.001719	75.7789	8.4659	40
45	.009130	109.530	9.0079	.1110	986.639	.001014	78.1551	8.6763	45
50	.005418	184.565	9.0417	.1106	1668.77	.5992-3	79.7341	8.8185	50
55	.003215	311.002	9.0617	.1104	2818.20	.3548-3	80.7712	8.9135	55
60	.001908	524.057	9.0736	.1102	4755.07	.2103-3	81.4461	8.9762	60
65	.001132	883.067	9.0806	.1101	8018.79	.1247-3	81.8819	9.0172	65
70	.6720-3	1488.02	9.0848	.1101	13518.4	.7397-4	82.1614	9.0438	70
75	.3988-3	2507.40	9.0873	.1100	22785.4	.4389-4	82.3397	9.0610	75
100	.2936-4	34064.2	9.0906	.1100	309665	.3229-5	82.6155	9.0880	100

12%		Single		Series				Arith Grad 12°		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m	
1 2 3 4 5	.8929 .7972 .7118 .6355 .5674	1.1200 1.2544 1.4049 1.5735 1.7623	.8929 1.6901 2.4018 3.0373 3.6048	1.1200 .5917 .4163 .3292 .2774	1.0000 2.1200 3.3744 4.7793 6.3528	1.0000 .4717 .2963 .2092 .1574	.7972 2.2208 4.1273 6.3970	.4717 .9246 1.3589 1.7746	1 2 3 4 5	
6	.5066	1.9738	4.1114	.2432	8.1152	.1232	8.9302	2.1720	6	
7	.4523	2.2107	4.5638	.2191	10.0890	.09912	11.6443	2.5515	7	
8	.4039	2.4760	4.9676	.2013	12.2997	.08130	14.4714	2.9131	8	
9	.3606	2.7731	5.3282	.1877	14.7757	.06768	17.3563	3.2574	9	
10	.3220	3.1058	5.6502	.1770	17.5487	.05698	20.2541	3.5847	10	
11	.2875	3.4785	5.9377	.1684	20.6546	.04842	23.1288	3.8953	11	
12	.2567	3.8960	6.1944	.1614	24.1331	.04144	25.9523	4.1897	12	
13	.2292	4.3635	6.4235	.1557	28.0291	.03568	28.7024	4.4683	13	
14	.2046	4.8871	6.6282	.1509	32.3926	.03087	31.3624	4.7317	14	
15	.1827	5.4736	6.8109	.1468	37.2797	.02682	33.9202	4.9803	15	
16	.1631	6.1304	6.9740	.1434	42.7533	.02339	36.3670	5.2147	16	
17	.1456	6.8660	7.1196	.1405	48.8837	.02046	38.6973	5.4353	17	
18	.1300	7.6900	7.2497	.1379	55.7497	.01794	40.9080	5.6427	18	
19	.1161	8.6128	7.3658	.1358	63.4397	.01576	42.9979	5.8375	19	
20	.1037	9.6463	7.4694	.1339	72.0524	.01388	44.9676	6.0202	20	
21	.09256	10.8038	7.5620	.1322	81.6987	.01224	46.8188	6.1913	21	
22	.08264	12.1003	7.6446	.1308	92.5026	.01081	48.5543	6.3514	22	
23	.07379	13.5523	7.7184	.1296	104.603	.009560	50.1776	6.5010	23	
24	.06588	15.1786	7.7843	.1285	118.155	.008463	51.6929	6.6406	24	
25	.05882	17.0001	7.8431	.1275	133.334	.007500	53.1046	6.7708	25	
26	.05252	19.0401	7.8957	.1267	150.334	.006652	54.4177	6.8921	26	
27	.04689	21.3249	7.9426	.1259	169.374	.005904	55.6369	7.0049	27	
28	.04187	23.8839	7.9844	.1252	190.699	.005244	56.7674	7.1098	28	
29	.03738	26.7499	8.0218	.1247	214.583	.004660	57.8141	7.2071	29	
30	.03338	29.9599	8.0552	.1241	241.333	.004144	58.7821	7.2974	30	
31	.02980	33.5551	8.0850	.1237	271.293	.003686	59.6761	7.3811	31	
32	.02661	37.5817	8.1116	.1233	304.848	.003280	60.5010	7.4586	32	
33	.02376	42.0915	8.1354	.1229	342.429	.002920	61.2612	7.5302	33	
34	.02121	47.1425	8.1566	.1226	384.521	.002601	61.9612	7.5965	34	
35	.01894	52.7996	8.1755	.1223	431.663	.002317	62.6052	7.6577	35	
36	.01691	59.1356	8.1924	.1221	484.463	.002064	63.1970	7.7141	36	
37	.01510	66.2318	8.2075	.1218	543.599	.001840	63.7406	7.7661	37	
38	.01348	74.1797	8.2210	.1216	609.831	.001640	64.2394	7.8141	38	
39	.01204	83.0812	8.2330	.1215	684.010	.001462	64.6967	7.8582	39	
40	.01075	93.0510	8.2438	.1213	767.091	.001304	65.1159	7.8988	40	
45	.006098	163.988	8.2825	.1207	1358.23	.7363-3	66.7342	8.0572	45	
50	.003460	289.002	8.3045	.1204	2400.02	.4167-3	67.7624	8.1597	50	
55	.001963	509.321	8.3170	.1202	4236.01	.2361-3	68.4082	8.2251	55	
60	.001114	897.597	8.3240	.1201	7471.64	.1338-3	68.8100	8.2664	60	
65	.6322-3	1581.87	8.3281	.1201	13173.9	.7591-4	69.0581	8.2922	65	
70	.3587-3	2787.80	8.3303	.1200	23223.3	.4306-4	69.2103	8.3082	70	
75	.2035-3	4913.06	8.3316	.1200	40933.8	.2443-4	69.3031	8.3181	75	
100	.1197-4	83522.3	8.3332	.1200	696011	.1437-5	69.4336	8.3321	100	

15%	5	Single Series					Arith Grad		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.8696 .7561 .6575 .5718 .4972	1.1500 1.3225 1.5209 1.7490 2.0114	.8696 1.6257 2.2832 2.8550 3.3522	1.1500 .6151 .4380 .3503 .2983	1.0000 2.1500 3.4725 4.9934 6.7424	1.0000 .4651 .2880 .2003 .1483	.7561 2.0712 3.7864 5.7751	.4651 .9071 1.3263 1.7228	1 2 3 4 5
6	.4323	2.3131	3.7845	.2642	8.7537	.1142	7.9368	2.0972	6
7	.3759	2.6600	4.1604	.2404	11.0668	.09036	10.1924	2.4498	7
8	.3269	3.0590	4.4873	.2229	13.7268	.07285	12.4807	2.7813	8
9	.2843	3.5179	4.7716	.2096	16.7858	.05957	14.7548	3.0922	9
10	.2472	4.0456	5.0188	.1993	20.3037	.04925	16.9795	3.3832	10
11	.2149	4.6524	5.2337	.1911	24.3493	.04107	19.1289	3.6549	11
12	.1869	5.3503	5.4206	.1845	29.0017	.03448	21.1849	3.9082	12
13	.1625	6.1528	5.5831	.1791	34.3519	.02911	23.1352	4.1438	13
14	.1413	7.0757	5.7245	.1747	40.5047	.02469	24.9725	4.3624	14
15	.1229	8.1371	5.8474	.1710	47.5804	.02102	26.6930	4.5650	15
16	.1069	9.3576	5.9542	.1679	55.7175	.01795	28.2960	4.7522	16
17	.09293	10.7613	6.0472	.1654	65.0751	.01537	29.7828	4.9251	17
18	.08081	12.3755	6.1280	.1632	75.8364	.01319	31.1565	5.0843	18
19	.07027	14.2318	6.1982	.1613	88.2118	.01134	32.4213	5.2307	19
20	.06110	16.3665	6.2593	.1598	102.444	.009761	33.5822	5.3651	20
21	.05313	18.8215	6.3125	.1584	118.810	.008417	34.6448	5.4883	21
22	.04620	21.6447	6.3587	.1573	137.632	.007266	35.6150	5.6010	22
23	.04017	24.8915	6.3988	.1563	159.276	.006278	36.4988	5.7040	23
24	.03493	28.6252	6.4338	.1554	184.168	.005430	37.3023	5.7979	24
25	.03038	32.9190	6.4641	.1547	212.793	.004699	38.0314	5.8834	25
26	.02642	37.8568	6.4906	.1541	245.712	.004070	38.6918	5.9612	26
27	.02297	43.5353	6.5135	.1535	283.569	.003526	39.2890	6.0319	27
28	.01997	50.0656	6.5335	.1531	327.104	.003057	39.8283	6.0960	28
29	.01737	57.5755	6.5509	.1527	377.170	.002651	40.3146	6.1541	29
30	.01510	66.2118	6.5660	.1523	434.745	.002300	40.7526	6.2066	30
31	.01313	76.1435	6.5791	.1520	500.957	.001996	41.1466	6.2541	31
32	.01142	87.5651	6.5905	.1517	577.100	.001733	41.5006	6.2970	32
33	.009931	100.700	6.6005	.1515	664.666	.001505	41.8184	6.3357	33
34	.008635	115.805	6.6091	.1513	765.365	.001307	42.1033	6.3705	34
35	.007509	133.176	6.6166	.1511	881.170	.001135	42.3586	6.4019	35
36	.006529	153.152	6.6231	.1510	1014.35	.9859-3	42.5872	6.4301	36
37	.005678	176.125	6.6288	.1509	1167.50	.8565-3	42.7916	6.4554	37
38	.004937	202.543	6.6338	.1507	1343.62	.7443-3	42.9743	6.4781	38
39	.004293	232.925	6.6380	.1506	1546.17	.6468-3	43.1374	6.4985	39
40	.003733	267.864	6.6418	.1506	1779.09	.5621-3	43.2830	6.5168	40
45	.001856	538.769	6.6543	.1503	3585.13	.2789-3	43.8051	6.5830	45
50	.9228-3	1083.66	6.6605	.1501	7217.72	.1385-3	44.0958	6.6205	50
55	.4588-3	2179.62	6.6636	.1501	14524.1	.6885-4	44.2558	6.6414	55
60	.2281-3	4384.00	6.6651	.1500	29220.0	.3422-4	44.3431	6.6530	60
65	.1134-3	8817.79	6.6659	.1500	58778.6	.1701-4	44.3903	6.6593	65
70	.5638-4	17735.7	6.6663	.1500	118231	.8458-5	44.4156	6.6627	70
75	.2803-4	35672.9	6.6665	.1500	237812	.4205-5	44.4292	6.6646	75
100	.8516-6	11743+2	6.6667	.1500	78287+2	.1277-6	44.4438	6.6666	100

18%		Single		S	eries		Arith Grad 18%		
m	P F	F P	P A	A P	F A	A F	P G	A G	m
1 2 3 4 5	.8475 .7182 .6086 .5158 .4371	1.1800 1.3924 1.6430 1.9388 2.2878	.8475 1.5656 2.1743 2.6901 3.1272	1.1800 .6387 .4599 .3717 .3198	1.0000 2.1800 3.5724 5.2154 7.1542	1.0000 .4587 .2799 .1917 .1398	.7182 1.9354 3.4828 5.2312	.4587 .8902 1.2947 1.6728	1 2 3 4 5
6	.3704	2.6996	3.4976	.2859	9.4420	.1059	7.0834	2.0252	6
7	.3139	3.1855	3.8115	.2624	12.1415	.08236	8.9670	2.3526	7
8	.2660	3.7589	4.0776	.2452	15.3270	.06524	10.8292	2.6558	8
9	.2255	4.4355	4.3030	.2324	19.0859	.05239	12.6329	2.9358	9
10	.1911	5.2338	4.4941	.2225	23.5213	.04251	14.3525	3.1936	10
11	.1619	6.1759	4.6560	.2148	28.7551	.03478	15.9716	3.4303	11
12	.1372	7.2876	4.7932	.2086	34.9311	.02863	17.4811	3.6470	12
13	.1163	8.5994	4.9095	.2037	42.2187	.02369	18.8765	3.8449	13
14	.09855	10.1472	5.0081	.1997	50.8180	.01968	20.1576	4.0250	14
15	.08352	11.9737	5.0916	.1964	60.9653	.01640	21.3269	4.1887	15
16	.07078	14.1290	5.1624	.1937	72.9390	.01371	22.3885	4.3369	16
17	.05998	16.6722	5.2223	.1915	87.0680	.01149	23.3482	4.4708	17
18	.05083	19.6733	5.2732	.1896	103.740	.009639	24.2123	4.5916	18
19	.04308	23.2144	5.3162	.1881	123.414	.008103	24.9877	4.7003	19
20	.03651	27.3930	5.3527	.1868	146.628	.006820	25.6813	4.7978	20
21	.03094	32.3238	5.3837	.1857	174.021	.005746	26.3000	4.8851	21
22	.02622	38.1421	5.4099	.1848	206.345	.004846	26.8506	4.9632	22
23	.02222	45.0076	5.4321	.1841	244.487	.004090	27.3394	5.0329	23
24	.01883	53.1090	5.4509	.1835	289.494	.003454	27.7725	5.0950	24
25	.01596	62.6686	5.4669	.1829	342.603	.002919	28.1555	5.1502	25
26	.01352	73.9490	5.4804	.1825	405.272	.002467	28.4935	5.1991	26
27	.01146	87.2598	5.4919	.1821	479.221	.002087	28.7915	5.2425	27
28	.009712	102.967	5.5016	.1818	566.481	.001765	29.0537	5.2810	28
29	.008230	121.501	5.5098	.1815	669.447	.001494	29.2842	5.3149	29
30	.006975	143.371	5.5168	.1813	790.948	.001264	29.4864	5.3448	30
31	.005911	169.177	5.5227	.1811	934.319	.001070	29.6638	5.3712	31
32	.005009	199.629	5.5277	.1809	1103.50	.9062-3	29.8191	5.3945	32
33	.004245	235.563	5.5320	.1808	1303.13	.7674-3	29.9549	5.4149	33
34	.003598	277.964	5.5356	.1806	1538.69	.6499-3	30.0736	5.4328	34
35	.003049	327.997	5.5386	.1806	1816.65	.5505-3	30.1773	5.4485	35
36	.002584	387.037	5.5412	.1805	2144.65	.4663-3	30.2677	5.4623	36
37	.002190	456.703	5.5434	.1804	2531.69	.3950-3	30.3465	5.4744	37
38	.001856	538.910	5.5452	.1803	2988.39	.3346-3	30.4152	5.4849	38
39	.001573	635.914	5.5468	.1803	3527.30	.2835-3	30.4749	5.4941	39
40	.001333	750.378	5.5482	.1802	4163.21	.2402-3	30.5269	5.5022	40
45	.5825-3	1716.68	5.5523	.1801	9531.58	.1049-3	30.7006	5.5293	45
50	.2546-3	3927.36	5.5541	.1800	21813.1	.4584-4	30.7856	5.5428	50
55	.1113-3	8984.84	5.5549	.1800	49910.2	.2004-4	30.8268	5.5494	55
60	.4865-4	20555.1	5.5553	.1800	114190	.8757-5	30.8465	5.5526	60
65	.2127-4	47025.2	5.5554	.1800	261245	.3828-5	30.8559	5.5542	65
70	.9295-5	107582	5.5555	.1800	597673	.1673-5	30.8603	5.5549	70
75	.4063-5	246122	5.5555	.1800	13673+2	.7313-6	30.8624	5.5553	75
100	.6483-7	15424+3	5.5556	.1800	85690+3	.1167-7	30.8642	5.5555	100

20%	3	Single Serie				eries Arith G			
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.8333 .6944 .5787 .4823 .4019	1.2000 1.4400 1.7280 2.0736 2.4883	.8333 1.5278 2.1065 2.5887 2.9906	1.2000 .6545 .4747 .3863 .3344	1.0000 2.2000 3.6400 5.3680 7.4416	1.0000 .4545 .2747 .1863 .1344	.6944 1.8519 3.2986 4.9061	.4545 .8791 1.2742 1.6405	1 2 3 4 5
6	.3349	2.9860	3.3255	.3007	9.9299	.1007	6.5806	1.9788	6
7	.2791	3.5832	3.6046	.2774	12.9159	.07742	8.2551	2.2902	7
8	.2326	4.2998	3.8372	.2606	16.4991	.06061	9.8831	2.5756	8
9	.1938	5.1598	4.0310	.2481	20.7989	.04808	11.4335	2.8364	9
10	.1615	6.1917	4.1925	.2385	25.9587	.03852	12.8871	3.0739	10
11	.1346	7.4301	4.3271	.2311	32.1504	.03110	14.2330	3.2893	11
12	.1122	8.9161	4.4392	.2253	39.5805	.02526	15.4667	3.4841	12
13	.09346	10.6993	4.5327	.2206	48.4966	.02062	16.5883	3.6597	13
14	.07789	12.8392	4.6106	.2169	59.1959	.01689	17.6008	3.8175	14
15	.06491	15.4070	4.6755	.2139	72.0351	.01388	18.5095	3.9588	15
16	.05409	18.4884	4.7296	.2114	87.4421	.01144	19.3208	4.0851	16
17	.04507	22.1861	4.7746	.2094	105.931	.009440	20.0419	4.1976	17
18	.03756	26.6233	4.8122	.2078	128.117	.007805	20.6805	4.2975	18
19	.03130	31.9480	4.8435	.2065	154.740	.006462	21.2439	4.3861	19
20	.02608	38.3376	4.8696	.2054	186.688	.005357	21.7395	4.4643	20
21	.02174	46.0051	4.8913	.2044	225.026	.004444	22.1742	4.5334	21
22	.01811	55.2061	4.9094	.2037	271.031	.003690	22.5546	4.5941	22
23	.01509	66.2474	4.9245	.2031	326.237	.003065	22.8867	4.6475	23
24	.01258	79.4968	4.9371	.2025	392.484	.002548	23.1760	4.6943	24
25	.01048	95.3962	4.9476	.2021	471.981	.002119	23.4276	4.7352	25
26	.008735	114.475	4.9563	.2018	567.377	.001762	23.6460	4.7709	26
27	.007280	137.371	4.9636	.2015	681.853	.001467	23.8353	4.8020	27
28	.006066	164.845	4.9697	.2012	819.223	.001221	23.9991	4.8291	28
29	.005055	197.814	4.9747	.2010	984.068	.001016	24.1406	4.8527	29
30	.004213	237.376	4.9789	.2008	1181.88	.8461-3	24.2628	4.8731	30
31	.003511	284.852	4.9824	.2007	1419.26	.7046-3	24.3681	4.8908	31
32	.002926	341.822	4.9854	.2006	1704.11	.5868-3	24.4588	4.9061	32
33	.002438	410.186	4.9878	.2005	2045.93	.4888-3	24.5368	4.9194	33
34	.002032	492.224	4.9898	.2004	2456.12	.4071-3	24.6038	4.9308	34
35	.001693	590.668	4.9915	.2003	2948.34	.3392-3	24.6614	4.9406	35
36	.001411	708.802	4.9929	.2003	3539.01	.2826-3	24.7108	4.9491	36
37	.001176	850.562	4.9941	.2002	4247.81	.2354-3	24.7531	4.9564	37
38	.9797-3	1020.67	4.9951	.2002	5098.37	.1961-3	24.7894	4.9627	38
39	.8165-3	1224.81	4.9959	.2002	6119.05	.1634-3	24.8204	4.9681	39
40	.6804-3	1469.77	4.9966	.2001	7343.86	.1362-3	24.8469	4.9728	40
45	.2734-3	3657.26	4.9986	.2001	18281.3	.5470-4	24.9316	4.9877	45
50	.1099-3	9100.44	4.9995	.2000	45497.2	.2198-4	24.9698	4.9945	50
55	.4416-4	22644.8	4.9998	.2000	113219	.8832-5	24.9868	4.9976	55
60	.1775-4	56347.5	4.9999	.2000	281733	.3549-5	24.9942	4.9989	60
65	.7132-5	140211	5.0000	.2000	701048	.1426-5	24.9975	4.9995	65
70	.2866-5	348889	5.0000	.2000	17444+2	.5732-6	24.9989	4.9998	70
75	.1152-5	868147	5.0000	.2000	43407+2	.2304-6	24.9995	4.9999	75
100	.1207-7	82818+3	5.0000	.2000	41409+4	.2415-8	25.0000	5.0000	100

25%		Single Series					Arith Grad		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.8000 .6400 .5120 .4096 .3277	1.2500 1.5625 1.9531 2.4414 3.0518	.8000 1.4400 1.9520 2.3616 2.6893	1.2500 .6944 .5123 .4234 .3718	1.0000 2.2500 3.8125 5.7656 8.2070	1.0000 .4444 .2623 .1734 .1218	.6400 1.6640 2.8928 4.2035	.4444 .8525 1.2249 1.5631	1 2 3 4 5
6	.2621	3.8147	2.9514	.3388	11.2588	.08882	5.5142	1.8683	6
7	.2097	4.7684	3.1611	.3163	15.0735	.06634	6.7725	2.1424	7
8	.1678	5.9605	3.3289	.3004	19.8419	.05040	7.9469	2.3872	8
9	.1342	7.4506	3.4631	.2888	25.8023	.03876	9.0207	2.6048	9
10	.1074	9.3132	3.5705	.2801	33.2529	.03007	9.9870	2.7971	10
11	.08590	11.6415	3.6564	.2735	42.5661	.02349	10.8460	2.9663	11
12	.06872	14.5519	3.7251	.2684	54.2077	.01845	11.6020	3.1145	12
13	.05498	18.1899	3.7801	.2645	68.7596	.01454	12.2617	3.2437	13
14	.04398	22.7374	3.8241	.2615	86.9495	.01150	12.8334	3.3559	14
15	.03518	28.4217	3.8593	.2591	109.687	.009117	13.3260	3.4530	15
16	.02815	35.5271	3.8874	.2572	138.109	.007241	13.7482	3.5366	16
17	.02252	44.4089	3.9099	.2558	173.636	.005759	14.1085	3.6084	17
18	.01801	55.5112	3.9279	.2546	218.045	.004586	14.4147	3.6698	18
19	.01441	69.3889	3.9424	.2537	273.556	.003656	14.6741	3.7222	19
20	.01153	86.7362	3.9539	.2529	342.945	.002916	14.8932	3.7667	20
21	.009223	108.420	3.9631	.2523	429.681	.002327	15.0777	3.8045	21
22	.007379	135.525	3.9705	.2519	538.101	.001858	15.2326	3.8365	22
23	.005903	169.407	3.9764	.2515	673.626	.001485	15.3625	3.8634	23
24	.004722	211.758	3.9811	.2512	843.033	.001186	15.4711	3.8861	24
25	.003778	264.698	3.9849	.2509	1054.79	.9481-3	15.5618	3.9052	25
26	.003022	330.872	3.9879	.2508	1319.49	.7579-3	15.6373	3.9212	26
27	.002418	413.590	3.9903	.2506	1650.36	.6059-3	15.7002	3.9346	27
28	.001934	516.988	3.9923	.2505	2063.95	.4845-3	15.7524	3.9457	28
29	.001547	646.235	3.9938	.2504	2580.94	.3875-3	15.7957	3.9551	29
30	.001238	807.794	3.9950	.2503	3227.17	.3099-3	15.8316	3.9628	30
31	.9904-3	1009.74	3.9960	.2502	4034.97	.2478-3	15.8614	3.9693	31
32	.7923-3	1262.18	3.9968	.2502	5044.71	.1982-3	15.8859	3.9746	32
33	.6338-3	1577.72	3.9975	.2502	6306.89	.1586-3	15.9062	3.9791	33
34	.5071-3	1972.15	3.9980	.2501	7884.61	.1268-3	15.9229	3.9828	34
35	.4056-3	2465.19	3.9984	.2501	9856.76	.1015-3	15.9367	3.9858	35
36	.3245-3	3081.49	3.9987	.2501	12322.0	.8116-4	15.9481	3.9883	36
37	.2596-3	3851.86	3.9990	.2501	15403.4	.6492-4	15.9574	3.9904	37
38	.2077-3	4814.82	3.9992	.2501	19255.3	.5193-4	15.9651	3.9921	38
39	.1662-3	6018.53	3.9993	.2500	24070.1	.4155-4	15.9714	3.9935	39
40	.1329-3	7523.16	3.9995	.2500	30088.7	.3324-4	15.9766	3.9947	40
45	.4356-4	22958.9	3.9998	.2500	91831.5	.1089-4	15.9915	3.9980	45
50	.1427-4	70064.9	3.9999	.2500	280256	.3568-5	15.9969	3.9993	50
55	.4677-5	213821	4.0000	.2500	855281	.1169-5	15.9989	3.9997	55
60	.1532-5	652530	4.0000	.2500	26101+2	.3831-6	15.9996	3.9999	60
65	.5022-6	19914+2	4.0000	.2500	79655+2	.1255-6	15.9999	4.0000	65
70	.1646-6	60772+2	4.0000	.2500	24309+3	.4114-7	16.0000	4.0000	70
75	.5392-7	18546+3	4.0000	.2500	74184+3	.1348-7	16.0000	4.0000	75
100	.2037-9	49091+5	4.0000	.2500	19636+6	.5093-10	16.0000	4.0000	100

30%	, D S	Single	Series				Arith Grad		
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.7692 .5917 .4552 .3501 .2693	1.3000 1.6900 2.1970 2.8561 3.7129	.7692 1.3609 1.8161 2.1662 2.4356	1.3000 .7348 .5506 .4616 .4106	1.0000 2.3000 3.9900 6.1870 9.0431	1.0000 .4348 .2506 .1616 .1106	.5917 1.5020 2.5524 3.6297	.4348 .8271 1.1783 1.4903	1 2 3 4 5
6	.2072	4.8268	2.6427	.3784	12.7560	.07839	4.6656	1.7654	6
7	.1594	6.2749	2.8021	.3569	17.5828	.05687	5.6218	2.0063	7
8	.1226	8.1573	2.9247	.3419	23.8577	.04192	6.4800	2.2156	8
9	.09430	10.6045	3.0190	.3312	32.0150	.03124	7.2343	2.3963	9
10	.07254	13.7858	3.0915	.3235	42.6195	.02346	7.8872	2.5512	10
11	.05580	17.9216	3.1473	.3177	56.4053	.01773	8.4452	2.6833	11
12	.04292	23.2981	3.1903	.3135	74.3270	.01345	8.9173	2.7952	12
13	.03302	30.2875	3.2233	.3102	97.6250	.01024	9.3135	2.8895	13
14	.02540	39.3738	3.2487	.3078	127.913	.007818	9.6437	2.9685	14
15	.01954	51.1859	3.2682	.3060	167.286	.005978	9.9172	3.0344	15
16	.01503	66.5417	3.2832	.3046	218.472	.004577	10.1426	3.0892	16
17	.01156	86.5042	3.2948	.3035	285.014	.003509	10.3276	3.1345	17
18	.008892	112.455	3.3037	.3027	371.518	.002692	10.4788	3.1718	18
19	.006840	146.192	3.3105	.3021	483.973	.002066	10.6019	3.2025	19
20	.005262	190.050	3.3158	.3016	630.165	.001587	10.7019	3.2275	20
21	.004048	247.065	3.3198	.3012	820.215	.001219	10.7828	3.2480	21
22	.003113	321.184	3.3230	.3009	1067.28	.9370-3	10.8482	3.2646	22
23	.002395	417.539	3.3254	.3007	1388.46	.7202-3	10.9009	3.2781	23
24	.001842	542.801	3.3272	.3006	1806.00	.5537-3	10.9433	3.2890	24
25	.001417	705.641	3.3286	.3004	2348.80	.4257-3	10.9773	3.2979	25
26	.001090	917.333	3.3297	.3003	3054.44	.3274-3	11.0045	3.3050	26
27	.8386-3	1192.53	3.3305	.3003	3971.78	.2518-3	11.0263	3.3107	27
28	.6450-3	1550.29	3.3312	.3002	5164.31	.1936-3	11.0437	3.3153	28
29	.4962-3	2015.38	3.3317	.3001	6714.60	.1489-3	11.0576	3.3189	29
30	.3817-3	2620.00	3.3321	.3001	8729.99	.1145-3	11.0687	3.3219	30
31	.2936-3	3405.99	3.3324	.3001	11350.0	.8811-4	11.0775	3.3242	31
32	.2258-3	4427.79	3.3326	.3001	14756.0	.6777-4	11.0845	3.3261	32
33	.1737-3	5756.13	3.3328	.3001	19183.8	.5213-4	11.0901	3.3276	33
34	.1336-3	7482.97	3.3329	.3000	24939.9	.4010-4	11.0945	3.3288	34
35	.1028-3	9727.86	3.3330	.3000	32422.9	.3084-4	11.0980	3.3297	35
36	.7908-4	12646.2	3.3331	.3000	42150.7	.2372-4	11.1007	3.3305	36
37	.6083-4	16440.1	3.3331	.3000	54796.9	.1825-4	11.1029	3.3311	37
38	.4679-4	21372.1	3.3332	.3000	71237.0	.1404-4	11.1047	3.3316	38
39	.3599-4	27783.7	3.3332	.3000	92609.1	.1080-4	11.1060	3.3319	39
40	.2769-4	36118.9	3.3332	.3000	120393	.8306-5	11.1071	3.3322	40
45	.7457-5	134107	3.3333	.3000	447019	.2237-5	11.1099	3.3330	45
50	.2008-5	497929	3.3333	.3000	16598+2	.6025-6	11.1108	3.3332	50
55	.5409-6	18488+2	3.3333	.3000	61626+2	.1623-6	11.1110	3.3333	55
60	.1457-6	68644+2	3.3333	.3000	22881+3	.4370-7	11.1111	3.3333	60
65	.3924-7	25487+3	3.3333	.3000	84957+3	.1177-7	11.1111	3.3333	65
70	.1057-7	94631+3	3.3333	.3000	31544+4	.3170-8	11.1111	3.3333	70
75	.2846-8	35136+4	3.3333	.3000	11712+5	.8538-9	11.1111	3.3333	75
100	.4033-11	24793+7	3.3333	.3000	82645+7	.1210-11	11.1111	3.3333	100

40%		Single		S	eries		Arith G	40%	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.7143 .5102 .3644 .2603 .1859	1.4000 1.9600 2.7440 3.8416 5.3782	.7143 1.2245 1.5889 1.8492 2.0352	1.4000 .8167 .6294 .5408 .4914	1.0000 2.4000 4.3600 7.1040 10.9456	1.0000 .4167 .2294 .1408 .09136	.5102 1.2391 2.0200 2.7637	.4167 .7798 1.0923 1.3580	1 2 3 4 5
6	.1328	7.5295	2.1680	.4613	16.3238	.06126	3.4278	1.5811	6
7	.09486	10.5414	2.2628	.4419	23.8534	.04192	3.9970	1.7664	7
8	.06776	14.7579	2.3306	.4291	34.3947	.02907	4.4713	1.9185	8
9	.04840	20.6610	2.3790	.4203	49.1526	.02034	4.8585	2.0422	9
10	.03457	28.9255	2.4136	.4143	69.8137	.01432	5.1696	2.1419	10
11	.02469	40.4957	2.4383	.4101	98.7391	.01013	5.4166	2.2215	11
12	.01764	56.6939	2.4559	.4072	139.235	.007182	5.6106	2.2845	12
13	.01260	79.3715	2.4685	.4051	195.929	.005104	5.7618	2.3341	13
14	.008999	111.120	2.4775	.4036	275.300	.003632	5.8788	2.3729	14
15	.006428	155.568	2.4839	.4026	386.420	.002588	5.9688	2.4030	15
16	.004591	217.795	2.4885	.4018	541.988	.001845	6.0376	2.4262	16
17	.003280	304.913	2.4918	.4013	759.784	.001316	6.0901	2.4441	17
18	.002343	426.879	2.4941	.4009	1064.70	.9392-3	6.1299	2.4577	18
19	.001673	597.630	2.4958	.4007	1491.58	.6704-3	6.1601	2.4682	19
20	.001195	836.683	2.4970	.4005	2089.21	.4787-3	6.1828	2.4761	20
21	.8537-3	1171.36	2.4979	.4003	2925.89	.3418-3	6.1998	2.4821	21
22	.6098-3	1639.90	2.4985	.4002	4097.24	.2441-3	6.2127	2.4866	22
23	.4356-3	2295.86	2.4989	.4002	5737.14	.1743-3	6.2222	2.4900	23
24	.3111-3	3214.20	2.4992	.4001	8033.00	.1245-3	6.2294	2.4925	24
25	.2222-3	4499.88	2.4994	.4001	11247.2	.8891-4	6.2347	2.4944	25
26	.1587-3	6299.83	2.4996	.4001	15747.1	.6350-4	6.2387	2.4959	26
27	.1134-3	8819.76	2.4997	.4000	22046.9	.4536-4	6.2416	2.4969	27
28	.8099-4	12347.7	2.4998	.4000	30866.7	.3240-4	6.2438	2.4977	28
29	.5785-4	17286.7	2.4999	.4000	43214.3	.2314-4	6.2454	2.4983	29
30	.4132-4	24201.4	2.4999	.4000	60501.1	.1653-4	6.2466	2.4988	30
31	.2951-4	33882.0	2.4999	.4000	84702.5	.1181-4	6.2475	2.4991	31
32	.2108-4	47434.8	2.4999	.4000	118585	.8433-5	6.2482	2.4993	32
33	.1506-4	66408.7	2.5000	.4000	166019	.6023-5	6.2487	2.4995	33
34	.1076-4	92972.2	2.5000	.4000	232428	.4302-5	6.2490	2.4996	34
35	.7683-5	130161	2.5000	.4000	325400	.3073-5	6.2493	2.4997	35
36	.5488-5	182226	2.5000	.4000	455561	.2195-5	6.2495	2.4998	36
37	.3920-5	255116	2.5000	.4000	637787	.1568-5	6.2496	2.4999	37
38	.2800-5	357162	2.5000	.4000	892903	.1120-5	6.2497	2.4999	38
39	.2000-5	500027	2.5000	.4000	12501+2	.8000-6	6.2498	2.4999	39
40	.1428-5	700038	2.5000	.4000	17501+2	.5714-6	6.2498	2.4999	40
45	.2656-6	37650+2	2.5000	.4000	94124+2	.1062-6	6.2500	2.5000	45
50	.4939-7	20249+3	2.5000	.4000	50622+3	.1975-7	6.2500	2.5000	50
55	.9182-8	10890+4	2.5000	.4000	27226+4	.3673-8	6.2500	2.5000	55
60	.1707-8	58571+4	2.5000	.4000	14643+5	.6829-9	6.2500	2.5000	60
65	.3175-9	31501+5	2.5000	.4000	78752+5	.1270-9	6.2500	2.5000	65
75	.5903-10	16942+6	2.5000	.4000	42355+6	.2361-10	6.2500	2.5000	70
	.1097-10	91118+6	2.5000	.4000	22779+7	.4390-11	6.2500	2.5000	75
	.2439-14	4100+11	2.5000	.4000	1025+12	.9756-15	6.2500	2.5000	100

50%	, <b>D</b> S	Single		Series				Arith Grad	
m	P F	F P	P A	A P	F A	A F	P G	$A \mid G$	m
1 2 3 4 5	.6667 .4444 .2963 .1975 .1317	1.5000 2.2500 3.3750 5.0625 7.5937	.6667 1.1111 1.4074 1.6049 1.7366	1.5000 .9000 .7105 .6231 .5758	1.0000 2.5000 4.7500 8.1250 13.1875	1.0000 .4000 .2105 .1231 .07583	.4444 1.0370 1.6296 2.1564	.4000 .7368 1.0154 1.2417	1 2 3 4 5
6 7 8 9 10	.08779 .05853 .03902 .02601 .01734	11.3906 17.0859 25.6289 38.4434 57.6650	1.8244 1.8829 1.9220 1.9480 1.9653	.5481 .5311 .5203 .5134 .5088	20.7812 32.1719 49.2578 74.8867 113.330	.04812 .03108 .02030 .01335 .008824	2.5953 2.9465 3.2196 3.4277 3.5838	1.4226 1.5648 1.6752 1.7596 1.8235	6 7 8 9 10
11 12 13 14 15	.01156 .007707 .005138 .003425 .002284	86.4976 129.746 194.620 291.929 437.894	1.9769 1.9846 1.9897 1.9931 1.9954	.5058 .5039 .5026 .5017 .5011	170.995 257.493 387.239 581.859 873.788	.005848 .003884 .002582 .001719 .001144	3.6994 3.7842 3.8459 3.8904 3.9224	1.8713 1.9068 1.9329 1.9519 1.9657	11 12 13 14 15
16 17 18 19 20	.001522 .001015 .6766-3 .4511-3 .3007-3	656.841 985.261 1477.89 2216.84 3325.26	1.9970 1.9980 1.9986 1.9991 1.9994	.5008 .5005 .5003 .5002 .5002	1311.68 1968.52 2953.78 4431.68 6648.51	.7624-3 .5080-3 .3385-3 .2256-3 .1504-3	3.9452 3.9614 3.9729 3.9811 3.9868	1.9756 1.9827 1.9878 1.9914 1.9940	16 17 18 19 20
21 22 23 24 25	.2005-3 .1337-3 .8910-4 .5940-4 .3960-4	4987.89 7481.83 11222.7 16834.1 25251.2	1.9996 1.9997 1.9998 1.9999	.5001 .5001 .5000 .5000	9973.77 14961.7 22443.5 33666.2 50500.3	.1003-3 .6684-4 .4456-4 .2970-4 .1980-4	3.9908 3.9936 3.9955 3.9969 3.9979	1.9958 1.9971 1.9980 1.9986 1.9990	21 22 23 24 25
26 27 28 29 30	.2640-4 .1760-4 .1173-4 .7823-5 .5215-5	37876.8 56815.1 85222.7 127834 191751	1.9999 2.0000 2.0000 2.0000 2.0000	.5000 .5000 .5000 .5000 .5000	75751.5 113628 170443 255666 383500	.1320-4 .8801-5 .5867-5 .3911-5 .2608-5	3.9985 3.9990 3.9993 3.9995 3.9997	1.9993 1.9995 1.9997 1.9998 1.9998	26 27 28 29 30
31 32 33 34 35	.3477-5 .2318-5 .1545-5 .1030-5 .6868-6	287627 431440 647160 970740 14561+2	2.0000 2.0000 2.0000 2.0000 2.0000	.5000 .5000 .5000 .5000 .5000	575251 862878 12943+2 19415+2 29122+2	.1738-5 .1159-5 .7726-6 .5151-6 .3434-6	3.9998 3.9998 3.9999 3.9999	1.9999 1.9999 1.9999 2.0000 2.0000	31 32 33 34 35
36 37 38 39 40	.4578-6 .3052-6 .2035-6 .1357-6 .9044-7	21842+2 32762+2 49144+2 73716+2 11057+3	2.0000 2.0000 2.0000 2.0000 2.0000	.5000 .5000 .5000 .5000	43683+2 65525+2 98287+2 14743+3 22115+3	.2289-6 .1526-6 .1017-6 .6783-7 .4522-7	4.0000 4.0000 4.0000 4.0000 4.0000	2.0000 2.0000 2.0000 2.0000 2.0000	36 37 38 39 40
45 50 55 60 65	.1191-7 .1568-8 .2065-9 .2720-10 .3582-11	83967+3 63762+4 48419+5 36768+6 27921+7	2.0000 2.0000 2.0000 2.0000 2.0000	.5000 .5000 .5000 .5000	16793+4 12752+5 96839+5 73537+6 55842+7	.5955-8 .7842-9 .1033-9 .1360-10 .1791-11	4.0000 4.0000 4.0000 4.0000 4.0000	2.0000 2.0000 2.0000 2.0000 2.0000	45 50 55 60 65
70 75 100	.4716-12 .6211-13 .2460-17	21203+8 16101+9 4066+14	2.0000 2.0000 2.0000	.5000 .5000 .5000	42405+8 32201+9 8131+14	.2358-12 .3105-13 .1230-17	4.0000 4.0000 4.0000	2.0000 2.0000 2.0000	70 75 100