

## EXAMINATION

Course code: SFB13114	Course: Global Markets and Institutions
Date: 2.12.2014	Duration from 09 a.m. to 01 p.m.
Permitted sources: Mother tongue – English and English – mother tongue dictionaries Ordinary calculator (not financial calculator!) The set with Monthly Compound Interest Tables will be distributed at the exam start.	Lecturer: Danuta Tomczak/MaherAsal
<p>The examination: The examination papers consist of 4 pages inclusive this page. Please check that the examination papers are complete before you start answering the questions.</p> <p><i>Three of five questions must be answered.</i></p>	
<p>Date of announcement of the examination results: 5.1.2015</p> <p>The examination results will be made available on the Studentweb no later than two workdays after the announcement of the examination results (<a href="http://www.hiof.no/studentweb">www.hiof.no/studentweb</a>).</p>	

**Three of five questions must be answered. Mark which questions you answer!**

**Question 1**

- a) What are the main functions of the financial system? Explain why indirect finance, which involves the activities of financial intermediaries, is many times more important than direct finance, in which businesses raise funds directly from lenders in financial markets.
  - i. The one-year interest rate over the next five years is expected to be: 5%, 6%, 7%, 8% and 9%. Use Expectation theory to calculate the interest rates on: a two-year bond, a three-year bond, a four-year bond and a five-year bond? What is the shape of yield curve according to this theory?
  - ii. What is happening to the yield curve?
- b) A zero coupon bond has a par value of \$1,000 and matures in 10 years. The bond is selling for \$600 today. What is the yield to maturity for this bond?

**Question 2**

- a) Calculate the duration of a \$1,000 6% coupon bond with three years to maturity. Assume that all market interest rates are 7%.
- b) A security's price fully reflects all available information in an efficient market. Is this statement true, false, or uncertain? Explain your answer. What are the different forms of market efficiency? How would you test for market efficiency?
- c) What characteristics define the money market? Why do government use the money markets? Why do business use the money markets?

**Question 3**

- a) Consider a 30-year, fixed-rate mortgage for \$100,000 at a nominal rate of 9% compounded monthly.
  - i. Construct an amortization schedule for the first 4 years.
  - ii. If the borrower wants to pay off the remaining balance on the mortgage after 5 years, what is the remaining balance on the mortgage?

b) Three stocks; A, B and C with the following information:

State	Probability	Return on stock (A)	Return on stock (B)	Return on stock (C)
Boom	.40	.10	.15	.20

Recession	.60	.08	.04	0
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- i- Calculate the expected return for each of these three stocks
- ii- Calculate the standard deviations for each of these three stocks
- iii- If you have to choose only one stock, based on expected return and risk, which stock would you choose?

**Question 4**

a) Consider the two bonds described below:

	Bond A	Bond B
Maturity	15 yrs	20 yrs
Coupon Rate ( <i>Paid semiannually</i> )	10%	6%
Par Value	\$1,000	\$1,000

- i. If both bonds had a required return of 8%, what would the bonds' prices be?
  - ii. Explain what it means if a bond sells at a discount, a premium, and at its face amount (par value). Are these two bonds selling at a discount, premium, or par?
- b) There are at least five primary classes of mutual funds available to investors. Define these five classes. What are the load fund? What distinguishes a hedge fund from other types of mutual funds?

**Question 5**

a) Assume the following Balance sheet and Income Statement for SE Bank where the required reserves are 8%.

**SE Bank Balance Sheet as of December 2014, Million \$**

Assets		Liabilities	
Required Reserves	8	Checkable Deposits	\$100
Excess Reserves	3	Bank Capital	\$ 6
T-bills	45		
Loans	50		

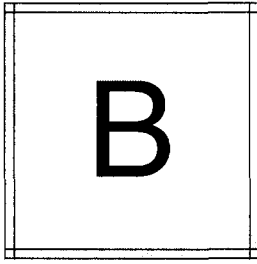
**SE Bank Balance Sheet as in December 2014, Million \$**

<b>Operating Income</b>			
- Interest income	456		
- Noninterest income	342,8		
<b>Total Operating Income</b>		798,8	
<b>Operating expense</b>			

- Interest expense	423		
- Noninterest expense	318,8	741,8	57
<b>Operating expense</b>			
<b>Net Operating income</b>			
Tax Paid	55,8		
Net Income			1,2

- i. On the first month of operations, deposits fall by \$5 million. What does the balance sheet look like? Are there any problems?
  - ii. Calculate ROA, ROE and NIM for SEB bank..
- b) What is the annualized discount rate % and investment rate % on a Treasury bill that you purchase for \$9,900 that will mature in 91 days for \$10,000?
- c) A bond pays \$80 per year in interest (8% coupon). The bond has 5 years before it matures at which time it will pay \$1,000. Assuming a discount rate of 10%, what should be the price of the bond?

APPENDIX



# MONTHLY COMPOUND INTEREST TABLES

MONTHLY COMPOUND INTEREST TABLES

6.00% ANNUAL INTEREST RATE

0.5000% MONTHLY EFFECTIVE INTEREST RATE

		1	2	3	4	5	6		
		AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1		
MONTHS								MONTHS	
1	1.005000	1.000000	1.000000	0.995025	0.995025	1.005000		1	
2	1.010025	2.005000	0.498753	0.990075	1.985099	0.503753		2	
3	1.015075	3.015025	0.331672	0.985149	2.970248	0.336672		3	
4	1.020151	4.030100	0.248133	0.980248	3.950496	0.253133		4	
5	1.025251	5.050251	0.198010	0.975371	4.925866	0.203010		5	
6	1.030378	6.075502	0.164595	0.970518	5.896384	0.169595		6	
7	1.035529	7.105879	0.140729	0.965690	6.862074	0.145729		7	
8	1.040707	8.141409	0.122829	0.960885	7.822959	0.127829		8	
9	1.045911	9.182116	0.108907	0.956105	8.779064	0.113907		9	
10	1.051140	10.228026	0.097771	0.951348	9.730412	0.102771		10	
11	1.056396	11.279167	0.088659	0.946615	10.677027	0.093659		11	
12	1.061678	12.335562	0.081066	0.941905	11.618932	0.086066		12	
YEARS								MONTHS	
1	1.061678	12.335562	0.081066	0.941905	11.618932	0.086066		12	
2	1.127160	25.431955	0.039321	0.887186	22.562866	0.044321		24	
3	1.196681	39.336105	0.025422	0.835645	32.871016	0.030422		36	
4	1.270489	54.097832	0.018485	0.787098	42.580318	0.023485		48	
5	1.348850	69.770031	0.014333	0.741372	51.725561	0.019333		60	
6	1.432044	86.408856	0.011573	0.698302	60.339514	0.016573		72	
7	1.520370	104.073927	0.009609	0.657735	68.453042	0.014609		84	
8	1.614143	122.828542	0.008141	0.619524	76.095218	0.013141		96	
9	1.713699	142.739900	0.007006	0.583533	83.293424	0.012006		108	
10	1.819397	163.879347	0.006102	0.549633	90.073453	0.011102		120	
11	1.931613	186.322629	0.005367	0.517702	96.459599	0.010367		132	
12	2.050751	210.150163	0.004759	0.487626	102.474743	0.009759		144	
13	2.177237	235.447328	0.004247	0.459298	108.140440	0.009247		156	
14	2.311524	262.304766	0.003812	0.432615	113.476990	0.008812		168	
15	2.454094	290.818712	0.003439	0.407482	118.503515	0.008439		180	
16	2.605457	321.091337	0.003114	0.383810	123.238025	0.008114		192	
17	2.766156	353.231110	0.002831	0.361513	127.697486	0.007831		204	
18	2.936766	387.353194	0.002582	0.340511	131.897876	0.007582		216	
19	3.117899	423.579854	0.002361	0.320729	135.854246	0.007361		228	
20	3.310204	462.040895	0.002164	0.302096	139.580772	0.007164		240	
21	3.514371	502.874129	0.001989	0.284546	143.090806	0.006989		252	
22	3.731129	546.225867	0.001831	0.268015	146.396927	0.006831		264	
23	3.961257	592.251446	0.001688	0.252445	149.510979	0.006688		276	
24	4.205579	641.115782	0.001560	0.237779	152.444121	0.006560		288	
25	4.464970	692.993962	0.001443	0.223966	155.206864	0.006443		300	
26	4.740359	748.071876	0.001337	0.210954	157.809106	0.006337		312	
27	5.032734	806.546875	0.001240	0.198699	160.260172	0.006240		324	
28	5.343142	868.628484	0.001151	0.187156	162.568844	0.006151		336	
29	5.672696	934.539150	0.001070	0.176283	164.743394	0.006070		348	
30	6.022575	1004.515042	0.000996	0.166042	166.791614	0.005996		360	
31	6.394034	1078.806895	0.000927	0.156396	168.720844	0.005927		372	
32	6.788405	1157.680906	0.000864	0.147310	170.537996	0.005864		384	
33	7.207098	1241.419693	0.000806	0.138752	172.249581	0.005806		396	
34	7.651617	1330.323306	0.000752	0.130691	173.861732	0.005752		408	
35	8.123551	1424.710299	0.000702	0.123099	175.380226	0.005702		420	
36	8.624594	1524.918875	0.000656	0.115947	176.810504	0.005656		432	
37	9.156540	1631.308097	0.000613	0.109212	178.157690	0.005613		444	
38	9.721296	1744.259173	0.000573	0.102867	179.426611	0.005573		456	
39	10.320884	1864.176824	0.000536	0.096891	180.621815	0.005536		468	
40	10.957454	1991.490734	0.000502	0.091262	181.747584	0.005502		480	

MONTHLY COMPOUND INTEREST TABLES							
7.00% ANNUAL INTEREST RATE				0.5833% MONTHLY EFFECTIVE INTEREST RATE			
	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.005833	1.000000	1.000000	0.994200	0.994200	1.005833	1
2	1.011701	2.005833	0.498546	0.988435	1.982635	0.504379	2
3	1.017602	3.017534	0.331396	0.982702	2.965337	0.337230	3
4	1.023538	4.035136	0.247823	0.977003	3.942340	0.253656	4
5	1.029509	5.058675	0.197680	0.971337	4.913677	0.203514	5
6	1.035514	6.088184	0.164253	0.965704	5.879381	0.170086	6
7	1.041555	7.123698	0.140377	0.960103	6.839484	0.146210	7
8	1.047631	8.165253	0.122470	0.954535	7.794019	0.128304	8
9	1.053742	9.212883	0.108544	0.948999	8.743018	0.114377	9
10	1.059889	10.266625	0.097403	0.943495	9.686513	0.103236	10
11	1.066071	11.326514	0.088288	0.938024	10.624537	0.094122	11
12	1.072290	12.392585	0.080693	0.932583	11.557120	0.086527	12
YEARS							MONTHS
1	1.072290	12.392585	0.080693	0.932583	11.557120	0.086527	12
2	1.149806	25.681032	0.038939	0.869712	22.335099	0.044773	24
3	1.232926	39.930101	0.025044	0.811079	32.386464	0.030877	36
4	1.322054	55.209236	0.018113	0.756399	41.760201	0.023946	48
5	1.417625	71.592902	0.013968	0.705405	50.501994	0.019801	60
6	1.520106	89.160944	0.011216	0.657849	58.654444	0.017049	72
7	1.629994	107.998981	0.009259	0.613499	66.257285	0.015093	84
8	1.747826	128.198821	0.007800	0.572139	73.347569	0.013634	96
9	1.874177	149.858909	0.006673	0.533568	79.959850	0.012506	108
10	2.009661	173.084807	0.005778	0.497596	86.126354	0.011611	120
11	2.154940	197.989707	0.005051	0.464050	91.877134	0.010884	132
12	2.310721	224.694985	0.004450	0.432765	97.240216	0.010284	144
13	2.477763	253.330789	0.003947	0.403590	102.241738	0.009781	156
14	2.656881	284.036677	0.003521	0.376381	106.906074	0.009354	168
15	2.848947	316.962297	0.003155	0.351007	111.255958	0.008988	180
16	3.054897	352.268112	0.002839	0.327343	115.312587	0.008672	192
17	3.275736	390.126188	0.002563	0.305275	119.095732	0.008397	204
18	3.512539	430.721027	0.002322	0.284694	122.623831	0.008155	216
19	3.766461	474.250470	0.002109	0.265501	125.914077	0.007942	228
20	4.038739	520.926660	0.001920	0.247602	128.982506	0.007753	240
21	4.330700	570.977075	0.001751	0.230910	131.844073	0.007585	252
22	4.643766	624.645640	0.001601	0.215342	134.512723	0.007434	264
23	4.979464	682.193909	0.001466	0.200825	137.001461	0.007299	276
24	5.339430	743.902347	0.001344	0.187286	139.322418	0.007178	288
25	5.725418	810.071693	0.001234	0.174660	141.486903	0.007068	300
26	6.139309	881.024427	0.001135	0.162885	143.505467	0.006968	312
27	6.583120	957.106339	0.001045	0.151904	145.387946	0.006878	324
28	7.059015	1038.688219	0.000963	0.141663	147.143515	0.006796	336
29	7.569311	1126.167659	0.000888	0.132112	148.780729	0.006721	348
30	8.116497	1219.970996	0.000820	0.123206	150.307568	0.006653	360
31	8.703240	1320.555383	0.000757	0.114900	151.731473	0.006591	372
32	9.332398	1428.411024	0.000700	0.107154	153.059383	0.006533	384
33	10.007037	1544.063557	0.000648	0.099930	154.297770	0.006481	396
34	10.730447	1668.076622	0.000599	0.093193	155.452669	0.006433	408
35	11.506152	1801.054601	0.000555	0.086910	156.529709	0.006389	420
36	12.337932	1943.645569	0.000514	0.081051	157.534139	0.006348	432
37	13.229843	2096.544450	0.000477	0.075587	158.470853	0.006310	444
38	14.186229	2260.496403	0.000442	0.070491	159.344418	0.006276	456
39	15.211753	2436.300456	0.000410	0.065739	160.159090	0.006244	468
40	16.311411	2624.813398	0.000381	0.061307	160.918839	0.006214	480

MONTHLY COMPOUND INTEREST TABLES

8.00% ANNUAL INTEREST RATE

0.6667% MONTHLY EFFECTIVE INTEREST RATE

	1 AMOUNT OF \$1 AT COMPOUND INTEREST	2 ACCUMULATION OF \$1 PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT VALUE REVERSION OF \$1	5 PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	6 INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.006667	1.000000	1.000000	0.993377	0.993377	1.006667	1
2	1.013378	2.006667	0.498339	0.986799	1.980176	0.505006	2
3	1.020134	3.020044	0.331121	0.980264	2.960440	0.337788	3
4	1.026935	4.040178	0.247514	0.973772	3.934212	0.254181	4
5	1.033781	5.067113	0.197351	0.967323	4.901535	0.204018	5
6	1.040673	6.100893	0.163910	0.960917	5.862452	0.170577	6
7	1.047610	7.141566	0.140025	0.954553	6.817005	0.146692	7
8	1.054595	8.189176	0.122112	0.948232	7.765237	0.128779	8
9	1.061625	9.243771	0.108181	0.941952	8.707189	0.114848	9
10	1.068703	10.305396	0.097037	0.935714	9.642903	0.103703	10
11	1.075827	11.374099	0.087919	0.929517	10.572420	0.094586	11
12	1.083000	12.449926	0.080322	0.923361	11.495782	0.086988	12
YEARS							MONTHS
1	1.083000	12.449926	0.080322	0.923361	11.495782	0.086988	12
2	1.172888	25.933190	0.038561	0.852596	22.110544	0.045227	24
3	1.270237	40.535558	0.024670	0.787255	31.911806	0.031336	36
4	1.375666	56.349915	0.017746	0.726921	40.961913	0.024413	48
5	1.489846	73.476856	0.013610	0.671210	49.318433	0.020276	60
6	1.613502	92.252325	0.010867	0.619770	57.034522	0.017533	72
7	1.747422	112.113308	0.008920	0.572272	64.159261	0.015586	84
8	1.892457	133.868583	0.007470	0.528414	70.737970	0.014137	96
9	2.049530	157.429535	0.006352	0.487917	76.812497	0.013019	108
10	2.219640	182.946035	0.005466	0.450523	82.421481	0.012133	120
11	2.403869	210.580392	0.004749	0.415996	87.600600	0.011415	132
12	2.603389	240.508387	0.004158	0.384115	92.382800	0.010825	144
13	2.819469	272.920390	0.003664	0.354677	96.798498	0.010331	156
14	3.053484	308.022574	0.003247	0.327495	100.875784	0.009913	168
15	3.306921	346.038222	0.002890	0.302396	104.640592	0.009557	180
16	3.581394	387.209149	0.002583	0.279221	108.116871	0.009249	192
17	3.878648	431.797244	0.002316	0.257822	111.326733	0.008983	204
18	4.200574	480.086128	0.002083	0.238063	114.290596	0.008750	216
19	4.549220	532.382966	0.001878	0.219818	117.027313	0.008545	228
20	4.926803	589.020416	0.001698	0.202971	119.554292	0.008364	240
21	5.335725	650.358746	0.001538	0.187416	121.887606	0.008204	252
22	5.778588	716.788127	0.001395	0.173053	124.042099	0.008062	264
23	6.258207	788.731114	0.001268	0.159790	126.031475	0.007935	276
24	6.777636	866.645333	0.001154	0.147544	127.868388	0.007821	288
25	7.340176	951.026395	0.001051	0.136237	129.564523	0.007718	300
26	7.949407	1042.411042	0.000959	0.125796	131.130668	0.007626	312
27	8.609204	1141.380571	0.000876	0.116155	132.576786	0.007543	324
28	9.323763	1248.564521	0.000801	0.107253	133.912076	0.007468	336
29	10.097631	1364.644687	0.000733	0.099033	135.145031	0.007399	348
30	10.935730	1490.359449	0.000671	0.091443	136.283494	0.007338	360
31	11.843390	1626.508474	0.000615	0.084435	137.334707	0.007281	372
32	12.826385	1773.957801	0.000564	0.077964	138.305357	0.007230	384
33	13.890969	1933.645350	0.000517	0.071989	139.201617	0.007184	396
34	15.043913	2106.586886	0.000475	0.066472	140.029190	0.007141	408
35	16.292550	2293.882485	0.000436	0.061378	140.793338	0.007103	420
36	17.644824	2496.723526	0.000401	0.056674	141.498923	0.007067	432
37	19.109335	2716.400273	0.000368	0.052330	142.150433	0.007035	444
38	20.695401	2954.310082	0.000338	0.048320	142.752013	0.007005	456
39	22.413109	3211.966288	0.000311	0.044617	143.307488	0.006978	468
40	24.273386	3491.007831	0.000286	0.041197	143.820392	0.006953	480



MONTHLY COMPOUND INTEREST TABLES

9.00% ANNUAL INTEREST RATE

0.7500% MONTHLY EFFECTIVE INTEREST RATE

	1 AMOUNT OF \$1 AT COMPOUND INTEREST	2 ACCUMULATION OF \$1 PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT VALUE REVERSION OF \$1	5 PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	6 INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.007500	1.000000	1.000000	0.992556	0.992556	1.007500	1
2	1.015056	2.007500	0.498132	0.985167	1.977723	0.505632	2
3	1.022669	3.022556	0.330846	0.977833	2.955556	0.338346	3
4	1.030339	4.045225	0.247205	0.970554	3.926110	0.254705	4
5	1.038067	5.075565	0.197022	0.963329	4.889440	0.204522	5
6	1.045852	6.113631	0.163569	0.956158	5.845598	0.171069	6
7	1.053696	7.159484	0.139675	0.949040	6.794638	0.147175	7
8	1.061599	8.213180	0.121756	0.941975	7.736613	0.129256	8
9	1.069561	9.274779	0.107819	0.934963	8.671576	0.115319	9
10	1.077583	10.344339	0.096671	0.928003	9.599580	0.104171	10
11	1.085664	11.421922	0.087551	0.921095	10.520675	0.095051	11
12	1.093807	12.507586	0.079951	0.914238	11.434913	0.087451	12
YEARS							MONTHS
1	1.093807	12.507586	0.079951	0.914238	11.434913	0.087451	12
2	1.196414	26.188471	0.038185	0.835831	21.889146	0.045685	24
3	1.308645	41.152716	0.024300	0.764149	31.446805	0.031800	36
4	1.431405	57.520711	0.017385	0.698614	40.184782	0.024885	48
5	1.565681	75.424137	0.013258	0.638700	48.173374	0.020758	60
6	1.712553	95.007028	0.010526	0.583924	55.476849	0.018026	72
7	1.873202	116.426928	0.008589	0.533845	62.153965	0.016089	84
8	2.048921	139.856164	0.007150	0.488062	68.258439	0.014650	96
9	2.241124	165.483223	0.006043	0.446205	73.839382	0.013543	108
10	2.451357	193.514277	0.005168	0.407937	78.941693	0.012668	120
11	2.681311	224.174837	0.004461	0.372952	83.606420	0.011961	132
12	2.932837	257.711570	0.003880	0.340967	87.871092	0.011380	144
13	3.207957	294.394279	0.003397	0.311725	91.770018	0.010897	156
14	3.508886	334.518079	0.002989	0.284991	95.334564	0.010489	168
15	3.838043	378.405769	0.002643	0.260549	98.593409	0.010143	180
16	4.198078	426.410427	0.002345	0.238204	101.572769	0.009845	192
17	4.591887	478.918252	0.002088	0.217775	104.296613	0.009588	204
18	5.022638	536.351674	0.001864	0.199099	106.786856	0.009364	216
19	5.493796	599.172747	0.001669	0.182024	109.063531	0.009169	228
20	6.009152	667.886870	0.001497	0.166413	111.144954	0.008997	240
21	6.572851	743.046852	0.001346	0.152141	113.047870	0.008846	252
22	7.189430	825.257358	0.001212	0.139093	114.787589	0.008712	264
23	7.863848	915.179777	0.001093	0.127164	116.378106	0.008593	276
24	8.601532	1013.537539	0.000987	0.116258	117.832218	0.008487	288
25	9.408415	1121.121937	0.000892	0.106288	119.161622	0.008392	300
26	10.290989	1238.798495	0.000807	0.097172	120.377014	0.008307	312
27	11.256354	1367.513924	0.000731	0.088839	121.488172	0.008231	324
28	12.312278	1508.303750	0.000663	0.081220	122.504035	0.008163	336
29	13.467255	1662.300631	0.000602	0.074254	123.432776	0.008102	348
30	14.730576	1830.743483	0.000546	0.067886	124.281866	0.008046	360
31	16.112406	2014.987436	0.000496	0.062064	125.058136	0.007996	372
32	17.623861	2216.514743	0.000451	0.056741	125.767832	0.007951	384
33	19.277100	2436.946701	0.000410	0.051875	126.416664	0.007910	396
34	21.085425	2678.056697	0.000373	0.047426	127.009850	0.007873	408
35	23.063384	2941.784474	0.000340	0.043359	127.552164	0.007840	420
36	25.226888	3230.251735	0.000310	0.039640	128.047967	0.007810	432
37	27.593344	3545.779215	0.000282	0.036241	128.501250	0.007782	444
38	30.181790	3890.905350	0.000257	0.033133	128.915659	0.007757	456
39	33.013050	4268.406696	0.000234	0.030291	129.294526	0.007734	468
40	36.109902	4681.320273	0.000214	0.027693	129.640902	0.007714	480

MONTHLY COMPOUND INTEREST TABLES

10.00% ANNUAL INTEREST RATE

0.8333% MONTHLY EFFECTIVE INTEREST RATE

	1 AMOUNT OF \$1 AT COMPOUND INTEREST	2 ACCUMULATION OF \$1 PER PERIOD	3 SINKING FUND FACTOR	4 PRESENT VALUE REVERSION OF \$1	5 PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	6 INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.008333	1.000000	1.000000	0.991736	0.991736	1.008333	1
2	1.016736	2.008333	0.497925	0.983539	1.975275	0.506259	2
3	1.025209	3.025069	0.330571	0.975411	2.950686	0.338904	3
4	1.033752	4.050278	0.246897	0.967350	3.918036	0.255230	4
5	1.042367	5.084031	0.196694	0.959355	4.877391	0.205028	5
6	1.051053	6.126398	0.163228	0.951427	5.828817	0.171561	6
7	1.059812	7.177451	0.139325	0.943563	6.772381	0.147659	7
8	1.068644	8.237263	0.121400	0.935765	7.708146	0.129733	8
9	1.077549	9.305907	0.107459	0.928032	8.636178	0.115792	9
10	1.086529	10.383456	0.096307	0.920362	9.556540	0.104640	10
11	1.095583	11.469985	0.087184	0.912756	10.469296	0.095517	11
12	1.104713	12.565568	0.079583	0.905212	11.374508	0.087916	12
YEARS							MONTHS
1	1.104713	12.565568	0.079583	0.905212	11.374508	0.087916	12
2	1.220391	26.446915	0.037812	0.819410	21.670855	0.046145	24
3	1.348182	41.781821	0.023934	0.741740	30.991236	0.032267	36
4	1.489354	58.722492	0.017029	0.671432	39.428160	0.025363	48
5	1.645309	77.437072	0.012914	0.607789	47.065369	0.021247	60
6	1.817594	98.111314	0.010193	0.550178	53.978665	0.018526	72
7	2.007920	120.950418	0.008268	0.498028	60.236667	0.016601	84
8	2.218176	146.181076	0.006841	0.450821	65.901488	0.015174	96
9	2.450448	174.053713	0.005745	0.408089	71.029355	0.014079	108
10	2.707041	204.844979	0.004882	0.369407	75.671163	0.013215	120
11	2.990504	238.860493	0.004187	0.334392	79.872986	0.012520	132
12	3.303649	276.437876	0.003617	0.302696	83.676528	0.011951	144
13	3.649584	317.950102	0.003145	0.274004	87.119542	0.011478	156
14	4.031743	363.809201	0.002749	0.248032	90.236201	0.011082	168
15	4.453920	414.470346	0.002413	0.224521	93.057439	0.010746	180
16	4.920303	470.436376	0.002126	0.203240	95.611259	0.010459	192
17	5.435523	532.262780	0.001879	0.183975	97.923008	0.010212	204
18	6.004693	600.563216	0.001665	0.166536	100.015633	0.009998	216
19	6.633463	676.015601	0.001479	0.150751	101.909902	0.009813	228
20	7.328074	759.368836	0.001317	0.136462	103.624619	0.009650	240
21	8.095419	851.450244	0.001174	0.123527	105.176801	0.009508	252
22	8.943115	953.173779	0.001049	0.111818	106.581856	0.009382	264
23	9.879576	1065.549097	0.000938	0.101219	107.853730	0.009272	276
24	10.914097	1189.691580	0.000841	0.091625	109.005045	0.009174	288
25	12.056945	1326.833403	0.000754	0.082940	110.047230	0.009087	300
26	13.319465	1478.335767	0.000676	0.075078	110.990629	0.009010	312
27	14.714187	1645.702407	0.000608	0.067962	111.844605	0.008941	324
28	16.254954	1830.594523	0.000546	0.061520	112.617635	0.008880	336
29	17.957060	2034.847258	0.000491	0.055688	113.317392	0.008825	348
30	19.837399	2260.487925	0.000442	0.050410	113.950820	0.008776	360
31	21.914634	2509.756117	0.000398	0.045632	114.524207	0.008732	372
32	24.209383	2785.125947	0.000359	0.041306	115.043244	0.008692	384
33	26.744422	3089.330596	0.000324	0.037391	115.513083	0.008657	396
34	29.544912	3425.389447	0.000292	0.033847	115.938387	0.008625	408
35	32.638650	3796.638052	0.000263	0.030639	116.323377	0.008597	420
36	36.056344	4206.761236	0.000238	0.027734	116.671876	0.008571	432
37	39.831914	4659.829677	0.000215	0.025105	116.987340	0.008548	444
38	44.002836	5160.340305	0.000194	0.022726	117.272903	0.008527	456
39	48.610508	5713.260935	0.000175	0.020572	117.531398	0.008508	468
40	53.700663	6324.079581	0.000158	0.018622	117.765391	0.008491	480

MONTHLY COMPOUND INTEREST TABLES							
11.00% ANNUAL INTEREST RATE				0.9167% MONTHLY EFFECTIVE INTEREST RATE			
	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.009167	1.000000	1.000000	0.990917	0.990917	1.009167	1
2	1.018417	2.009167	0.497719	0.981916	1.972832	0.506885	2
3	1.027753	3.027584	0.330296	0.972997	2.945829	0.339463	3
4	1.037174	4.055337	0.246589	0.964158	3.909987	0.255755	4
5	1.046681	5.092511	0.196367	0.955401	4.865388	0.205533	5
6	1.056276	6.139192	0.162888	0.946722	5.812110	0.172055	6
7	1.065958	7.195468	0.138976	0.938123	6.750233	0.148143	7
8	1.075730	8.261427	0.121044	0.929602	7.679835	0.130211	8
9	1.085591	9.337156	0.107099	0.921158	8.600992	0.116266	9
10	1.095542	10.422747	0.095944	0.912790	9.513783	0.105111	10
11	1.105584	11.518289	0.086818	0.904499	10.418282	0.095985	11
12	1.115719	12.623873	0.079215	0.896283	11.314565	0.088382	12
YEARS							MONTHS
1	1.115719	12.623873	0.079215	0.896283	11.314565	0.088382	12
2	1.244829	26.708566	0.037441	0.803323	21.455619	0.046608	24
3	1.388879	42.423123	0.023572	0.720005	30.544874	0.032739	36
4	1.549598	59.956151	0.016679	0.645329	38.691421	0.025846	48
5	1.728916	79.518080	0.012576	0.578397	45.993034	0.021742	60
6	1.928984	101.343692	0.009867	0.518408	52.537346	0.019034	72
7	2.152204	125.694940	0.007956	0.464640	58.402903	0.017122	84
8	2.401254	152.864085	0.006542	0.416449	63.660103	0.015708	96
9	2.679124	183.177212	0.005459	0.373256	68.372043	0.014626	108
10	2.989150	216.998139	0.004608	0.334543	72.595275	0.013775	120
11	3.335051	254.732784	0.003926	0.299846	76.380487	0.013092	132
12	3.720979	296.834038	0.003369	0.268747	79.773109	0.012536	144
13	4.151566	343.807200	0.002909	0.240873	82.813859	0.012075	156
14	4.631980	396.216042	0.002524	0.215890	85.539231	0.011691	168
15	5.167988	454.689575	0.002199	0.193499	87.981937	0.011366	180
16	5.766021	519.929596	0.001923	0.173430	90.171293	0.011090	192
17	6.433259	592.719117	0.001687	0.155442	92.133576	0.010854	204
18	7.177708	673.931757	0.001484	0.139320	93.892337	0.010650	216
19	8.008304	764.542228	0.001308	0.124870	95.468685	0.010475	228
20	8.935015	865.638038	0.001155	0.111919	96.881539	0.010322	240
21	9.968965	978.432537	0.001022	0.100311	98.147856	0.010189	252
22	11.122562	1104.279485	0.000906	0.089907	99.282835	0.010072	264
23	12.409652	1244.689295	0.000803	0.080582	100.300098	0.009970	276
24	13.845682	1401.347165	0.000714	0.072225	101.211853	0.009880	288
25	15.447889	1576.133301	0.000634	0.064734	102.029044	0.009801	300
26	17.235500	1771.145485	0.000565	0.058020	102.761478	0.009731	312
27	19.229972	1988.724252	0.000503	0.052002	103.417947	0.009670	324
28	21.455242	2231.480981	0.000448	0.046609	104.006328	0.009615	336
29	23.938018	2502.329236	0.000400	0.041775	104.533685	0.009566	348
30	26.708098	2804.519736	0.000357	0.037442	105.006346	0.009523	360
31	29.798728	3141.679369	0.000318	0.033558	105.429984	0.009485	372
32	33.247002	3517.854723	0.000284	0.030078	105.809684	0.009451	384
33	37.094306	3937.560650	0.000254	0.026958	106.150002	0.009421	396
34	41.386816	4405.834459	0.000227	0.024162	106.455024	0.009394	408
35	46.176050	4928.296368	0.000203	0.021656	106.728409	0.009370	420
36	51.519489	5511.216962	0.000181	0.019410	106.973440	0.009348	432
37	57.481264	6161.592447	0.000162	0.017397	107.193057	0.009329	444
38	64.132929	6887.228628	0.000145	0.015593	107.389897	0.009312	456
39	71.554317	7696.834582	0.000130	0.013975	107.566320	0.009297	468
40	79.834499	8600.127195	0.000116	0.012526	107.724446	0.009283	480

MONTHLY COMPOUND INTEREST TABLES

12.00% ANNUAL INTEREST RATE

1.0000% MONTHLY EFFECTIVE INTEREST RATE

		1	2	3	4	5	6		
		AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1		
MONTHS								MONTHS	
1	1.010000	1.000000	1.000000	0.990099	0.990099	1.010000		1	
2	1.020100	2.010000	0.497512	0.980296	1.970395	0.507512		2	
3	1.030301	3.030100	0.330022	0.970590	2.940985	0.340022		3	
4	1.040604	4.060401	0.246281	0.960980	3.901966	0.256281		4	
5	1.051010	5.101005	0.196040	0.951466	4.853431	0.206040		5	
6	1.061520	6.152015	0.162548	0.942045	5.795476	0.172548		6	
7	1.072135	7.213535	0.138628	0.932718	6.728195	0.148628		7	
8	1.082857	8.285671	0.120690	0.923483	7.651678	0.130690		8	
9	1.093685	9.368527	0.106740	0.914340	8.566018	0.116740		9	
10	1.104622	10.462213	0.095582	0.905287	9.471305	0.105582		10	
11	1.115668	11.566835	0.086454	0.896324	10.367628	0.096454		11	
12	1.126825	12.682503	0.078849	0.887449	11.255077	0.088849		12	
YEARS								MONTHS	
1	1.126825	12.682503	0.078849	0.887449	11.255077	0.088849		12	
2	1.269735	26.973465	0.037073	0.787566	21.243387	0.047073		24	
3	1.430769	43.076878	0.023214	0.698925	30.107505	0.033214		36	
4	1.612226	61.222608	0.016334	0.620260	37.973959	0.026334		48	
5	1.816697	81.669670	0.012244	0.550450	44.955038	0.022244		60	
6	2.047099	104.709931	0.009550	0.488496	51.150391	0.019550		72	
7	2.306723	130.672274	0.007653	0.433515	56.648453	0.017653		84	
8	2.599273	159.927293	0.006253	0.384723	61.527703	0.016253		96	
9	2.928926	192.892579	0.005184	0.341422	65.857790	0.015184		108	
10	3.300387	230.038689	0.004347	0.302995	69.700522	0.014347		120	
11	3.718959	271.895856	0.003678	0.268892	73.110752	0.013678		132	
12	4.190616	319.061559	0.003134	0.238628	76.137157	0.013134		144	
13	4.722091	372.209054	0.002687	0.211771	78.822939	0.012687		156	
14	5.320970	432.096982	0.002314	0.187936	81.206434	0.012314		168	
15	5.995802	499.580198	0.002002	0.166783	83.321664	0.012002		180	
16	6.756220	575.621974	0.001737	0.148012	85.198824	0.011737		192	
17	7.613078	661.307751	0.001512	0.131353	86.864707	0.011512		204	
18	8.578606	757.860630	0.001320	0.116569	88.343095	0.011320		216	
19	9.666588	866.658830	0.001154	0.103449	89.655089	0.011154		228	
20	10.892554	989.255365	0.001011	0.091806	90.819416	0.011011		240	
21	12.274002	1127.400210	0.000887	0.081473	91.852698	0.010887		252	
22	13.830653	1283.065279	0.000779	0.072303	92.769683	0.010779		264	
23	15.584726	1458.472574	0.000686	0.064165	93.583461	0.010686		276	
24	17.561259	1656.125905	0.000604	0.056944	94.305647	0.010604		288	
25	19.788466	1878.846626	0.000532	0.050534	94.946551	0.010532		300	
26	22.298139	2129.813909	0.000470	0.044847	95.515321	0.010470		312	
27	25.126101	2412.610125	0.000414	0.039799	96.020075	0.010414		324	
28	28.312720	2731.271980	0.000366	0.035320	96.468019	0.010366		336	
29	31.903481	3090.348134	0.000324	0.031345	96.865546	0.010324		348	
30	35.949641	3494.964133	0.000286	0.027817	97.218331	0.010286		360	
31	40.508956	3950.895567	0.000253	0.024686	97.531410	0.010253		372	
32	45.646505	4464.650520	0.000224	0.021907	97.809252	0.010224		384	
33	51.435625	5043.562459	0.000198	0.019442	98.055822	0.010198		396	
34	57.958949	5695.894923	0.000176	0.017254	98.274641	0.010176		408	
35	65.309595	6430.959471	0.000155	0.015312	98.468831	0.010155		420	
36	73.592486	7259.248603	0.000138	0.013588	98.641166	0.010138		432	
37	82.925855	8192.585529	0.000122	0.012059	98.794103	0.010122		444	
38	93.442929	9244.292939	0.000108	0.010702	98.929828	0.010108		456	
39	105.293832	10429.383172	0.000096	0.009497	99.050277	0.010096		468	
40	118.647725	11764.772510	0.000085	0.008428	99.157169	0.010085		480	

MONTHLY COMPOUND INTEREST TABLES

13.00% ANNUAL INTEREST RATE

1.0833% MONTHLY EFFECTIVE INTEREST RATE

	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.010833	1.000000	1.000000	0.989283	0.989283	1.010833	1
2	1.021784	2.010833	0.497306	0.978680	1.967963	0.508140	2
3	1.032853	3.032617	0.329748	0.968192	2.936155	0.340581	3
4	1.044043	4.065471	0.245974	0.957815	3.893970	0.256807	4
5	1.055353	5.109513	0.195713	0.947550	4.841520	0.206547	5
6	1.066786	6.164866	0.162210	0.937395	5.778915	0.173043	6
7	1.078343	7.231652	0.138281	0.927349	6.706264	0.149114	7
8	1.090025	8.309995	0.120337	0.917410	7.623674	0.131170	8
9	1.101834	9.400020	0.106383	0.907578	8.531253	0.117216	9
10	1.113770	10.501854	0.095221	0.897851	9.429104	0.106055	10
11	1.125836	11.615624	0.086091	0.888229	10.317333	0.096924	11
12	1.138032	12.741460	0.078484	0.878710	11.196042	0.089317	12
YEARS							MONTHS
1	1.138032	12.741460	0.078484	0.878710	11.196042	0.089317	12
2	1.295118	27.241655	0.036708	0.772130	21.034112	0.047542	24
3	1.473886	43.743348	0.022861	0.678478	29.678917	0.033694	36
4	1.677330	62.522811	0.015994	0.596185	37.275190	0.026827	48
5	1.908857	83.894449	0.011920	0.523874	43.950107	0.022753	60
6	2.172341	108.216068	0.009241	0.460333	49.815421	0.020074	72
7	2.472194	135.894861	0.007359	0.404499	54.969328	0.018192	84
8	2.813437	167.394225	0.005974	0.355437	59.498115	0.016807	96
9	3.201783	203.241525	0.004920	0.312326	63.477604	0.015754	108
10	3.643733	244.036917	0.004098	0.274444	66.974419	0.014931	120
11	4.146687	290.463399	0.003443	0.241156	70.047103	0.014276	132
12	4.719064	343.298242	0.002913	0.211906	72.747100	0.013746	144
13	5.370448	403.426010	0.002479	0.186204	75.119613	0.013312	156
14	6.111745	471.853363	0.002119	0.163619	77.204363	0.012953	168
15	6.955364	549.725914	0.001819	0.143774	79.036253	0.012652	180
16	7.915430	638.347406	0.001567	0.126336	80.645952	0.012400	192
17	9.008017	739.201542	0.001353	0.111012	82.060410	0.012186	204
18	10.251416	853.976825	0.001171	0.097548	83.303307	0.012004	216
19	11.666444	984.594826	0.001016	0.085716	84.395453	0.011849	228
20	13.276792	1133.242353	0.000882	0.075319	85.355132	0.011716	240
21	15.109421	1302.408067	0.000768	0.066184	86.198412	0.011601	252
22	17.195012	1494.924144	0.000669	0.058156	86.939409	0.011502	264
23	19.568482	1714.013694	0.000583	0.051103	87.590531	0.011417	276
24	22.269568	1963.344717	0.000509	0.044904	88.162677	0.011343	288
25	25.343491	2247.091520	0.000445	0.039458	88.665428	0.011278	300
26	28.841716	2570.004599	0.000389	0.034672	89.107200	0.011222	312
27	32.822810	2937.490172	0.000340	0.030467	89.495389	0.011174	324
28	37.353424	3355.700690	0.000298	0.026771	89.836495	0.011131	336
29	42.509410	3831.637843	0.000261	0.023524	90.136227	0.011094	348
30	48.377089	4373.269783	0.000229	0.020671	90.399605	0.011062	360
31	55.054699	4989.664524	0.000200	0.018164	90.631038	0.011034	372
32	62.654036	5691.141761	0.000176	0.015961	90.834400	0.011009	384
33	71.302328	6489.445641	0.000154	0.014025	91.013097	0.010987	396
34	81.144365	7397.941387	0.000135	0.012324	91.170119	0.010969	408
35	92.344923	8431.839055	0.000119	0.010829	91.308095	0.010952	420
36	105.091522	9608.448184	0.000104	0.009516	91.429337	0.010937	432
37	119.597566	10947.467591	0.000091	0.008361	91.535873	0.010925	444
38	136.105914	12471.315170	0.000080	0.007347	91.629487	0.010914	456
39	154.892951	14205.503212	0.000070	0.006456	91.711747	0.010904	468
40	176.273210	16179.065533	0.000062	0.005673	91.784030	0.010895	480

MONTHLY COMPOUND INTEREST TABLES

14.00% ANNUAL INTEREST RATE

1.1667% MONTHLY EFFECTIVE INTEREST RATE

		1	2	3	4	5	6		
		AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1		
MONTHS								MONTHS	
1	1.011667	1.000000	1.000000	0.988468	0.988468	1.011667	1	1	
2	1.023469	2.011667	0.497100	0.977069	1.965537	0.508767	2	2	
3	1.035410	3.035136	0.329475	0.965801	2.931338	0.341141	3	3	
4	1.047490	4.070546	0.245667	0.954663	3.886001	0.257334	4	4	
5	1.059710	5.118036	0.195387	0.943654	4.829655	0.207054	5	5	
6	1.072074	6.177746	0.161871	0.932772	5.762427	0.173538	6	6	
7	1.084581	7.249820	0.137934	0.922015	6.684442	0.149601	7	7	
8	1.097235	8.334401	0.119985	0.911382	7.595824	0.131651	8	8	
9	1.110036	9.431636	0.106026	0.900872	8.496696	0.117693	9	9	
10	1.122986	10.541672	0.094862	0.890483	9.387178	0.106528	10	10	
11	1.136088	11.664658	0.085729	0.880214	10.267392	0.097396	11	11	
12	1.149342	12.800745	0.078120	0.870063	11.137455	0.089787	12	12	
13	1.162750	13.949036	0.071938	0.860021	12.000000	0.083232	13	13	
14	1.176314	15.119533	0.067120	0.850088	12.857143	0.077659	14	14	
15	1.190036	16.312336	0.063612	0.840263	13.710000	0.072900	15	15	
16	1.203918	17.527446	0.061350	0.830545	14.559524	0.068887	16	16	
17	1.217962	18.764863	0.060170	0.820933	15.405712	0.065560	17	17	
18	1.232170	20.024587	0.060000	0.811426	16.248452	0.062860	18	18	
19	1.246544	21.306628	0.060838	0.802023	17.087742	0.060727	19	19	
20	1.261086	22.611986	0.062683	0.792723	17.923581	0.059111	20	20	
21	1.275798	23.940661	0.064534	0.783525	18.755968	0.057963	21	21	
22	1.290682	25.292653	0.066391	0.774428	19.584902	0.057244	22	22	
23	1.305739	26.667962	0.068254	0.765432	20.410382	0.056925	23	23	
24	1.320971	28.066588	0.070123	0.756536	21.232407	0.056966	24	24	
25	1.336379	29.488531	0.072000	0.747739	22.050977	0.057317	25	25	
26	1.351964	30.933791	0.073883	0.739042	22.866092	0.057928	26	26	
27	1.367727	32.402368	0.075773	0.730445	23.677752	0.058750	27	27	
28	1.383669	33.894261	0.077670	0.721948	24.485957	0.059733	28	28	
29	1.399791	35.409470	0.079573	0.713551	25.290707	0.060827	29	29	
30	1.416094	36.947995	0.081483	0.705254	26.092002	0.062000	30	30	
31	1.432579	38.509836	0.083399	0.697057	26.889842	0.063232	31	31	
32	1.449246	40.094983	0.085321	0.688960	27.684227	0.064514	32	32	
33	1.466096	41.703436	0.087250	0.680963	28.475157	0.065837	33	33	
34	1.483129	43.335195	0.089186	0.673066	29.262632	0.067191	34	34	
35	1.500346	45.000260	0.091129	0.665269	30.046652	0.068566	35	35	
36	1.517747	46.698731	0.093079	0.657572	30.827217	0.069962	36	36	
37	1.535332	48.430708	0.095036	0.649975	31.604327	0.071379	37	37	
38	1.553101	50.196191	0.097000	0.642478	32.377982	0.072817	38	38	
39	1.571054	52.005180	0.098971	0.635081	33.148182	0.074276	39	39	
40	1.589191	53.857675	0.100949	0.627784	33.914927	0.075756	40	40	

MONTHLY COMPOUND INTEREST TABLES						
15.00% ANNUAL INTEREST RATE			1.2500% MONTHLY EFFECTIVE INTEREST RATE			
	1	2	3	4	5	6
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1
MONTHS						
1	1.012500	1.000000	1.000000	0.987654	0.987654	1.012500
2	1.025156	2.012500	0.496894	0.975461	1.963115	0.509394
3	1.037971	3.037656	0.329201	0.963418	2.926534	0.341701
4	1.050945	4.075627	0.245361	0.951524	3.878058	0.257861
5	1.064082	5.126572	0.195062	0.939777	4.817835	0.207562
6	1.077383	6.190654	0.161534	0.928175	5.746010	0.174034
7	1.090850	7.268038	0.137589	0.916716	6.662726	0.150089
8	1.104486	8.358888	0.119633	0.905398	7.568124	0.132133
9	1.118292	9.463374	0.105671	0.894221	8.462345	0.118171
10	1.132271	10.581666	0.094503	0.883181	9.345526	0.107003
11	1.146424	11.713937	0.085368	0.872277	10.217803	0.097868
12	1.160755	12.860361	0.077758	0.861509	11.079312	0.090258
YEARS						
1	1.160755	12.860361	0.077758	0.861509	11.079312	0.090258
2	1.347351	27.788084	0.035987	0.742197	20.624235	0.048487
3	1.563944	45.115505	0.022165	0.639409	28.847267	0.034665
4	1.815355	65.228388	0.015331	0.550856	35.931481	0.027831
5	2.107181	88.574508	0.011290	0.474568	42.034592	0.023790
6	2.445920	115.673621	0.008645	0.408844	47.292474	0.021145
7	2.839113	147.129040	0.006797	0.352223	51.822185	0.019297
8	3.295513	183.641059	0.005445	0.303443	55.724570	0.017945
9	3.825282	226.022551	0.004424	0.261419	59.086509	0.016924
10	4.440213	275.217058	0.003633	0.225214	61.982847	0.016133
11	5.153998	332.319805	0.003009	0.194024	64.478068	0.015509
12	5.982526	398.602077	0.002509	0.167153	66.627722	0.015009
13	6.944244	475.539523	0.002103	0.144004	68.479668	0.014603
14	8.060563	564.845011	0.001770	0.124061	70.075134	0.014270
15	9.356334	668.506759	0.001496	0.106879	71.449643	0.013996
16	10.860408	788.832603	0.001268	0.092078	72.633794	0.013768
17	12.606267	928.501369	0.001077	0.079326	73.653950	0.013577
18	14.632781	1090.622520	0.000917	0.068340	74.532823	0.013417
19	16.985067	1278.805378	0.000782	0.058875	75.289980	0.013282
20	19.715494	1497.239481	0.000668	0.050722	75.942278	0.013168
21	22.884848	1750.787854	0.000571	0.043697	76.504237	0.013071
22	26.563691	2045.095272	0.000489	0.037645	76.988370	0.012989
23	30.833924	2386.713938	0.000419	0.032432	77.405455	0.012919
24	35.790617	2783.249347	0.000359	0.027940	77.764777	0.012859
25	41.544120	3243.529615	0.000308	0.024071	78.074336	0.012808
26	48.222525	3777.802015	0.000265	0.020737	78.341024	0.012765
27	55.974514	4397.961118	0.000227	0.017865	78.570778	0.012727
28	64.972670	5117.813598	0.000195	0.015391	78.768713	0.012695
29	75.417320	5953.385616	0.000168	0.013260	78.939236	0.012668
30	87.540995	6923.279611	0.000144	0.011423	79.086142	0.012644
31	101.613606	8049.088447	0.000124	0.009841	79.212704	0.012624
32	117.948452	9355.876140	0.000107	0.008478	79.321738	0.012607
33	136.909198	10872.735858	0.000092	0.007304	79.415671	0.012592
34	158.917970	12633.437629	0.000079	0.006293	79.496596	0.012579
35	184.464752	14677.180163	0.000068	0.005421	79.566313	0.012568
36	214.118294	17049.463544	0.000059	0.004670	79.626375	0.012559
37	248.538777	19803.102194	0.000050	0.004024	79.678119	0.012550
38	288.492509	22999.400699	0.000043	0.003466	79.722696	0.012543
39	334.868983	26709.518627	0.000037	0.002986	79.761101	0.012537
40	388.700685	31016.054774	0.000032	0.002573	79.794186	0.012532

MONTHLY COMPOUND INTEREST TABLES

16.00% ANNUAL INTEREST RATE

1.3333% MONTHLY EFFECTIVE INTEREST RATE

	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.013333	1.000000	1.000000	0.986842	0.986842	1.013333	1
2	1.026844	2.013333	0.496689	0.973857	1.960699	0.510022	2
3	1.040536	3.040178	0.328928	0.961043	2.921743	0.342261	3
4	1.054410	4.080713	0.245055	0.948398	3.870141	0.258389	4
5	1.068468	5.135123	0.194737	0.935919	4.806060	0.208071	5
6	1.082715	6.203591	0.161197	0.923604	5.729665	0.174530	6
7	1.097151	7.286306	0.137244	0.911452	6.641116	0.150577	7
8	1.111779	8.383457	0.119283	0.899459	7.540575	0.132616	8
9	1.126603	9.495236	0.105316	0.887624	8.428199	0.118649	9
10	1.141625	10.621839	0.094146	0.875945	9.304144	0.107479	10
11	1.156846	11.763464	0.085009	0.864419	10.168563	0.098342	11
12	1.172271	12.920310	0.077398	0.853045	11.021609	0.090731	12
YEARS							MONTHS
1	1.172271	12.920310	0.077398	0.853045	11.021609	0.090731	12
2	1.374219	28.066412	0.035630	0.727686	20.423539	0.048963	24
3	1.610957	45.821745	0.021824	0.620749	28.443811	0.035157	36
4	1.888477	66.635803	0.015007	0.529527	35.285465	0.028340	48
5	2.213807	91.035516	0.010985	0.451711	41.121706	0.024318	60
6	2.595181	119.638587	0.008359	0.385330	46.100283	0.021692	72
7	3.042255	153.169132	0.006529	0.328704	50.347235	0.019862	84
8	3.566347	192.476010	0.005195	0.280399	53.970077	0.018529	96
9	4.180724	238.554316	0.004192	0.239193	57.060524	0.017525	108
10	4.900941	292.570569	0.003418	0.204042	59.696816	0.016751	120
11	5.745230	355.892244	0.002810	0.174057	61.945692	0.016143	132
12	6.734965	430.122395	0.002325	0.148479	63.864085	0.015658	144
13	7.895203	517.140233	0.001934	0.126659	65.500561	0.015267	156
14	9.255316	619.148703	0.001615	0.108046	66.896549	0.014948	168
15	10.849737	738.730255	0.001354	0.092168	68.087390	0.014687	180
16	12.718830	878.912215	0.001138	0.078624	69.103231	0.014471	192
17	14.909912	1043.243434	0.000959	0.067069	69.969789	0.014292	204
18	17.478455	1235.884123	0.000809	0.057213	70.709003	0.014142	216
19	20.489482	1461.711177	0.000684	0.048806	71.339585	0.014017	228
20	24.019222	1726.441638	0.000579	0.041633	71.877501	0.013913	240
21	28.157032	2036.777427	0.000491	0.035515	72.336367	0.013824	252
22	33.007667	2400.575011	0.000417	0.030296	72.727801	0.013750	264
23	38.693924	2827.044294	0.000354	0.025844	73.061711	0.013687	276
24	45.359757	3326.981781	0.000301	0.022046	73.346552	0.013634	288
25	53.173919	3913.043898	0.000256	0.018806	73.589534	0.013589	300
26	62.334232	4600.067404	0.000217	0.016043	73.796809	0.013551	312
27	73.072600	5405.444997	0.000185	0.013685	73.973623	0.013518	324
28	85.660875	6349.565632	0.000157	0.011674	74.124454	0.013491	336
29	100.417742	7456.330682	0.000134	0.009958	74.253120	0.013467	348
30	117.716787	8753.759030	0.000114	0.008495	74.362878	0.013448	360
31	137.995952	10274.696396	0.000097	0.007247	74.456506	0.013431	372
32	161.768625	12057.646856	0.000083	0.006182	74.536375	0.013416	384
33	189.636635	14147.747615	0.000071	0.005273	74.604507	0.013404	396
34	222.305489	16597.911700	0.000060	0.004498	74.662626	0.013394	408
35	260.602233	19470.167508	0.000051	0.003837	74.712205	0.013385	420
36	305.496388	22837.229116	0.000044	0.003273	74.754498	0.013377	432
37	358.124495	26784.337116	0.000037	0.002792	74.790576	0.013371	444
38	419.818887	31411.416562	0.000032	0.002382	74.821352	0.013365	456
39	492.141422	36835.606677	0.000027	0.002032	74.847605	0.013360	468
40	576.923018	43194.226353	0.000023	0.001733	74.870000	0.013356	480



MONTHLY COMPOUND INTEREST TABLES

17.00% ANNUAL INTEREST RATE

1.4167% MONTHLY EFFECTIVE INTEREST RATE

	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.014167	1.000000	1.000000	0.986031	0.986031	1.014167	1
2	1.028534	2.014167	0.496483	0.972258	1.958289	0.510650	2
3	1.043105	3.042701	0.328655	0.958676	2.916965	0.342822	3
4	1.057882	4.085806	0.244750	0.945285	3.862250	0.258916	4
5	1.072869	5.143688	0.194413	0.932080	4.794330	0.208580	5
6	1.088068	6.216557	0.160861	0.919060	5.713391	0.175027	6
7	1.103482	7.304625	0.136900	0.906222	6.619613	0.151066	7
8	1.119115	8.408107	0.118933	0.893563	7.513176	0.133100	8
9	1.134969	9.527222	0.104962	0.881081	8.394257	0.119129	9
10	1.151048	10.662191	0.093789	0.868774	9.263031	0.107956	10
11	1.167354	11.813238	0.084651	0.856638	10.119669	0.098817	11
12	1.183892	12.980593	0.077038	0.844672	10.964341	0.091205	12
YEARS							MONTHS
1	1.183892	12.980593	0.077038	0.844672	10.964341	0.091205	12
2	1.401600	28.348209	0.035276	0.713471	20.225611	0.049442	24
3	1.659342	46.541802	0.021486	0.602648	28.048345	0.035653	36
4	1.964482	68.081048	0.014688	0.509040	34.655988	0.028855	48
5	2.325733	93.581182	0.010686	0.429972	40.237278	0.024853	60
6	2.753417	123.770579	0.008079	0.363185	44.951636	0.022246	72
7	3.259747	159.511558	0.006269	0.306772	48.933722	0.020436	84
8	3.859188	201.825006	0.004955	0.259122	52.297278	0.019121	96
9	4.568860	251.919548	0.003970	0.218873	55.138379	0.018136	108
10	5.409036	311.226062	0.003213	0.184876	57.538177	0.017380	120
11	6.403713	381.438553	0.002622	0.156159	59.565218	0.016788	132
12	7.581303	464.562540	0.002153	0.131903	61.277403	0.016319	144
13	8.975441	562.972341	0.001776	0.111415	62.723638	0.015943	156
14	10.625951	679.478890	0.001472	0.094109	63.945231	0.015638	168
15	12.579975	817.410030	0.001223	0.079491	64.977077	0.015390	180
16	14.893329	980.705566	0.001020	0.067144	65.848648	0.015186	192
17	17.632089	1174.029800	0.000852	0.056715	66.584839	0.015018	204
18	20.874484	1402.904761	0.000713	0.047905	67.206679	0.014879	216
19	24.713129	1673.867935	0.000597	0.040464	67.731930	0.014764	228
20	29.257669	1994.658995	0.000501	0.034179	68.175595	0.014668	240
21	34.637912	2374.440878	0.000421	0.028870	68.550346	0.014588	252
22	41.007538	2824.061507	0.000354	0.024386	68.866887	0.014521	264
23	48.548485	3356.363651	0.000298	0.020598	69.134261	0.014465	276
24	57.476150	3986.551756	0.000251	0.017399	69.360104	0.014418	288
25	68.045538	4732.626240	0.000211	0.014696	69.550868	0.014378	300
26	80.558550	5615.897651	0.000178	0.012413	69.712000	0.014345	312
27	95.372601	6661.595368	0.000150	0.010485	69.848104	0.014317	324
28	112.910833	7899.588246	0.000127	0.008857	69.963067	0.014293	336
29	133.674202	9365.237774	0.000107	0.007481	70.060174	0.014273	348
30	158.255782	11100.408126	0.000090	0.006319	70.142196	0.014257	360
31	187.357711	13154.661953	0.000076	0.005337	70.211479	0.014243	372
32	221.811244	15586.676066	0.000064	0.004508	70.270000	0.014231	384
33	262.600497	18465.917458	0.000054	0.003808	70.319431	0.014221	396
34	310.890557	21874.627526	0.000046	0.003217	70.361184	0.014212	408
35	368.060758	25910.171179	0.000039	0.002717	70.396451	0.014205	420
36	435.744087	30687.817929	0.000033	0.002295	70.426241	0.014199	432
37	515.873821	36344.034396	0.000028	0.001938	70.451403	0.014194	444
38	610.738749	43040.382285	0.000023	0.001637	70.472657	0.014190	456
39	723.048553	50968.133160	0.000020	0.001383	70.490609	0.014186	468
40	856.011201	60353.731845	0.000017	0.001168	70.505773	0.014183	480

MONTHLY COMPOUND INTEREST TABLES

18.00% ANNUAL INTEREST RATE

1.5000% MONTHLY EFFECTIVE INTEREST RATE

		1	2	3	4	5	6		
		AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$.		
MONTHS								MONTHS	
1		1.015000	1.000000	1.000000	0.985222	0.985222	1.015000	1	
2		1.030225	2.015000	0.496278	0.970662	1.955883	0.511278	2	
3		1.045678	3.045225	0.328383	0.956317	2.912200	0.363383	3	
4		1.061364	4.090903	0.244445	0.942184	3.854385	0.259445	4	
5		1.077284	5.152267	0.194089	0.928260	4.782645	0.209089	5	
6		1.093443	6.229551	0.160525	0.914542	5.697187	0.175525	6	
7		1.109845	7.322994	0.136556	0.901027	6.598214	0.151556	7	
8		1.126493	8.432839	0.118584	0.887711	7.485925	0.133584	8	
9		1.143390	9.559332	0.104610	0.874592	8.360517	0.119610	9	
10		1.160541	10.702722	0.093434	0.861667	9.222185	0.108434	10	
11		1.177949	11.863262	0.084294	0.848933	10.071118	0.099294	11	
12		1.195618	13.041211	0.076680	0.836387	10.907505	0.091680	12	
13		1.213567	14.235600	0.070580	0.824922	11.731800	0.085100	13	
14		1.231806	15.446439	0.065830	0.814517	12.543900	0.079450	14	
15		1.250345	16.673738	0.062380	0.805142	13.343800	0.074550	15	
16		1.269194	17.917497	0.059180	0.796767	14.131500	0.070250	16	
17		1.288363	19.177716	0.056170	0.789362	14.907000	0.066450	17	
18		1.307862	20.454495	0.053280	0.782897	15.670500	0.063100	18	
19		1.327701	21.747844	0.050490	0.777352	16.422000	0.060150	19	
20		1.347890	23.057773	0.047800	0.772707	17.161500	0.057550	20	
21		1.368339	24.384292	0.045200	0.768942	17.889000	0.055250	21	
22		1.389058	25.727411	0.042690	0.766037	18.614500	0.053200	22	
23		1.410047	27.087130	0.040260	0.763982	19.328000	0.051350	23	
24		1.431316	28.463449	0.037910	0.762767	20.029500	0.049650	24	
25		1.452865	29.856268	0.035630	0.762382	20.719000	0.048100	25	
26		1.474694	31.265587	0.033420	0.762817	21.396500	0.046700	26	
27		1.496813	32.691406	0.031280	0.764072	22.062000	0.045450	27	
28		1.519232	34.133725	0.029210	0.766147	22.715500	0.044350	28	
29		1.541951	35.592544	0.027210	0.769042	23.357000	0.043400	29	
30		1.564970	37.067863	0.025280	0.772757	23.986500	0.042600	30	
31		1.588299	38.559682	0.023420	0.777292	24.604000	0.041950	31	
32		1.611938	40.067901	0.021630	0.782647	25.208500	0.041450	32	
33		1.635887	41.592520	0.019910	0.788822	25.800000	0.041100	33	
34		1.660146	43.133539	0.018260	0.795817	26.378500	0.040900	34	
35		1.684725	44.691058	0.016680	0.803642	26.944000	0.040850	35	
36		1.709634	46.265077	0.015170	0.812307	27.496500	0.040950	36	
37		1.734873	47.855596	0.013730	0.821822	28.036000	0.041200	37	
38		1.760452	49.462615	0.012360	0.832197	28.562500	0.041600	38	
39		1.786371	51.086134	0.011060	0.843442	29.076000	0.042150	39	
40		1.812640	52.726153	0.009830	0.855567	29.576500	0.042850	40	
41		1.839259	54.382672	0.008670	0.868582	30.064000	0.043700	41	
42		1.866238	56.055691	0.007580	0.882507	30.538500	0.044700	42	
43		1.893577	57.745110	0.006560	0.897352	31.000000	0.045850	43	
44		1.921286	59.450929	0.005610	0.913127	31.448500	0.047150	44	
45		1.949365	61.173148	0.004730	0.929842	31.884000	0.048600	45	
46		1.977814	62.911767	0.003920	0.947507	32.306500	0.050200	46	
47		1.996643	64.666786	0.003180	0.966132	32.716000	0.051950	47	
48		2.015862	66.438205	0.002510	0.985727	33.112500	0.053850	48	
49		2.035481	68.226024	0.001910	1.006302	33.496000	0.055900	49	
50		2.055500	70.030243	0.001380	1.027867	33.866500	0.058100	50	

MONTHLY COMPOUND INTEREST TABLES

19.00% ANNUAL INTEREST RATE

1.5833% MONTHLY EFFECTIVE INTEREST RATE

	1	2	3	4	5	6	
	AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1	
MONTHS							MONTHS
1	1.015833	1.000000	1.000000	0.984413	0.984413	1.015833	1
2	1.031917	2.015833	0.496073	0.969070	1.953483	0.511906	2
3	1.048256	3.047751	0.328111	0.953965	2.907449	0.343944	3
4	1.064853	4.096007	0.244140	0.939096	3.846545	0.259974	4
5	1.081714	5.160860	0.193766	0.924459	4.771004	0.209599	5
6	1.098841	6.242574	0.160190	0.910050	5.681054	0.176024	6
7	1.116239	7.341415	0.136214	0.895865	6.576920	0.152047	7
8	1.133913	8.457654	0.118236	0.881902	7.458822	0.134069	8
9	1.151866	9.591566	0.104258	0.868156	8.326978	0.120092	9
10	1.170104	10.743433	0.093080	0.854625	9.181602	0.108913	10
11	1.188631	11.913537	0.083938	0.841304	10.022906	0.099771	11
12	1.207451	13.102168	0.076323	0.828191	10.851097	0.092157	12
YEARS							MONTHS
1	1.207451	13.102168	0.076323	0.828191	10.851097	0.092157	12
2	1.457938	28.922394	0.034575	0.685900	19.837878	0.050409	24
3	1.760389	48.024542	0.020823	0.568056	27.280649	0.036656	36
4	2.125583	71.089450	0.014067	0.470459	33.444684	0.029900	48
5	2.566537	98.939196	0.010107	0.389630	38.549682	0.025941	60
6	3.098968	132.566399	0.007543	0.322688	42.777596	0.023377	72
7	3.741852	173.169599	0.005775	0.267247	46.279115	0.021608	84
8	4.518103	222.195973	0.004501	0.221332	49.179042	0.020334	96
9	5.455388	281.392918	0.003554	0.183305	51.580735	0.019387	108
10	6.587114	352.870328	0.002834	0.151812	53.569796	0.018667	120
11	7.953617	439.175798	0.002277	0.125729	55.217118	0.018110	132
12	9.603603	543.385424	0.001840	0.104128	56.581415	0.017674	144
13	11.595879	669.213441	0.001494	0.086238	57.711314	0.017328	156
14	14.001456	821.144606	0.001218	0.071421	58.647086	0.017051	168
15	16.906072	1004.594042	0.000995	0.059150	59.422084	0.016829	180
16	20.413254	1226.100247	0.000816	0.048988	60.063930	0.016649	192
17	24.648004	1493.558135	0.000670	0.040571	60.595501	0.016503	204
18	29.761257	1816.500430	0.000551	0.033601	61.035743	0.016384	216
19	35.935259	2206.437425	0.000453	0.027828	61.400348	0.016287	228
20	43.390065	2677.267240	0.000374	0.023047	61.702310	0.016207	240
21	52.391377	3245.771169	0.000308	0.019087	61.952393	0.016141	252
22	63.260020	3932.211806	0.000254	0.015808	62.159509	0.016088	264
23	76.383375	4761.055238	0.000210	0.013092	62.331041	0.016043	276
24	92.229182	5761.843068	0.000174	0.010843	62.473102	0.016007	288
25	111.362218	6970.245332	0.000143	0.008980	62.590755	0.015977	300
26	134.464421	8429.331851	0.000119	0.007437	62.688195	0.015952	312
27	162.359199	10191.107326	0.000098	0.006159	62.768894	0.015931	324
28	196.040777	12318.364881	0.000081	0.005101	62.835728	0.015915	336
29	236.709632	14886.924139	0.000067	0.004225	62.891079	0.015901	348
30	285.815282	17988.333579	0.000056	0.003499	62.936920	0.015889	360
31	345.107947	21733.133503	0.000046	0.002898	62.974886	0.015879	372
32	416.700935	26254.795909	0.000038	0.002400	63.006328	0.015871	384
33	503.145960	31714.481694	0.000032	0.001987	63.032369	0.015865	396
34	607.524092	38306.784745	0.000026	0.001646	63.053935	0.015859	408
35	733.555571	46266.667644	0.000022	0.001363	63.071796	0.015855	420
36	885.732406	55877.836195	0.000018	0.001129	63.086589	0.015851	432
37	1069.478478	67482.851256	0.000015	0.000935	63.098840	0.015848	444
38	1291.342856	81495.338274	0.000012	0.000774	63.108986	0.015846	456
39	1559.233220	98414.729710	0.000010	0.000641	63.117389	0.015843	468
40	1882.697708	118844.065787	0.000008	0.000531	63.124348	0.015842	480

MONTHLY COMPOUND INTEREST TABLES

20.00% ANNUAL INTEREST RATE

1.6667% MONTHLY EFFECTIVE INTEREST RATE

		1	2	3	4	5	6		
		AMOUNT OF \$1 AT COMPOUND INTEREST	ACCUMULATION OF \$1 PER PERIOD	SINKING FUND FACTOR	PRESENT VALUE REVERSION OF \$1	PRESENT VALUE ORD. ANNUITY \$1 PER PERIOD	INSTALLMENT TO AMORTIZE \$1		
MONTHS								MONTHS	
1	1.016667	1.000000	1.000000	0.983607	0.983607	1.016667		1	
2	1.033611	2.016667	0.495868	0.967482	1.951088	0.512534		2	
3	1.050838	3.050278	0.327839	0.951622	2.902710	0.344506		3	
4	1.068352	4.101116	0.243836	0.936021	3.838731	0.260503		4	
5	1.086158	5.169468	0.193444	0.920677	4.759408	0.210110		5	
6	1.104260	6.255625	0.159856	0.905583	5.664991	0.176523		6	
7	1.122665	7.359886	0.135872	0.890738	6.555729	0.152538		7	
8	1.141376	8.482551	0.117889	0.876136	7.431865	0.134556		8	
9	1.160399	9.623926	0.103908	0.861773	8.293637	0.120574		9	
10	1.179739	10.784325	0.092727	0.847645	9.141283	0.109394		10	
11	1.199401	11.964064	0.083584	0.833749	9.975032	0.100250		11	
12	1.219391	13.163465	0.075968	0.820081	10.795113	0.092635		12	
YEARS								MONTHS	
1	1.219391	13.163465	0.075968	0.820081	10.795113	0.092635		12	
2	1.486915	29.214877	0.034229	0.672534	19.647986	0.050896		24	
3	1.813130	48.787826	0.020497	0.551532	26.908062	0.037164		36	
4	2.210915	72.654905	0.013764	0.452301	32.861916	0.030430		48	
5	2.695970	101.758208	0.009827	0.370924	37.744561	0.026494		60	
6	3.287442	137.246517	0.007286	0.304188	41.748727	0.023953		72	
7	4.008677	180.520645	0.005540	0.249459	45.032470	0.022206		84	
8	4.888145	233.288730	0.004287	0.204577	47.725406	0.020953		96	
9	5.960561	297.633662	0.003360	0.167769	49.933833	0.020027		108	
10	7.268255	376.095300	0.002659	0.137585	51.744924	0.019326		120	
11	8.862845	471.770720	0.002120	0.112831	53.230165	0.018786		132	
12	10.807275	588.436476	0.001699	0.092530	54.448184	0.018366		144	
13	13.178294	730.697658	0.001369	0.075882	55.447059	0.018035		156	
14	16.069495	904.169675	0.001106	0.062230	56.266217	0.017773		168	
15	19.594998	1115.699905	0.000896	0.051033	56.937994	0.017563		180	
16	23.893966	1373.637983	0.000728	0.041852	57.488906	0.017395		192	
17	29.136090	1688.165376	0.000592	0.034322	57.940698	0.017259		204	
18	35.528288	2071.697274	0.000483	0.028147	58.311205	0.017149		216	
19	43.322878	2539.372652	0.000394	0.023082	58.615050	0.017060		228	
20	52.827531	3109.651838	0.000322	0.018930	58.864229	0.016988		240	
21	64.417420	3805.045193	0.000263	0.015524	59.068575	0.016929		252	
22	78.550028	4653.001652	0.000215	0.012731	59.236156	0.016882		264	
23	95.783203	5686.992197	0.000176	0.010440	59.373585	0.016843		276	
24	116.797184	6947.831050	0.000144	0.008562	59.486289	0.016811		288	
25	142.421445	8485.286707	0.000118	0.007021	59.578715	0.016785		300	
26	173.667440	10360.046428	0.000097	0.005758	59.654512	0.016763		312	
27	211.768529	12646.111719	0.000079	0.004722	59.716672	0.016746		324	
28	258.228656	15433.719354	0.000065	0.003873	59.767648	0.016731		336	
29	314.881721	18832.903252	0.000053	0.003176	59.809452	0.016720		348	
30	383.963963	22977.837794	0.000044	0.002604	59.843735	0.016710		360	
31	468.202234	28032.134021	0.000036	0.002136	59.871850	0.016702		372	
32	570.921630	34195.297782	0.000029	0.001752	59.894907	0.016696		384	
33	696.176745	41710.604726	0.000024	0.001436	59.913815	0.016691		396	
34	848.911717	50874.703014	0.000020	0.001178	59.929321	0.016686		408	
35	1035.155379	62049.322767	0.000016	0.000966	59.942038	0.016683		420	
36	1262.259241	75675.554472	0.000013	0.000792	59.952466	0.016680		432	
37	1539.187666	92291.259933	0.000011	0.000650	59.961018	0.016678		444	
38	1876.871717	112552.303043	0.000009	0.000533	59.968032	0.016676		456	
39	2288.640640	137258.438381	0.000007	0.000437	59.973784	0.016674		468	
40	2790.747993	167384.879555	0.000006	0.000358	59.978500	0.016673		480	