

Tavole finanziarie dall'0.5 al 30%

$$i = 0.005 = 0.5\%; q = 1.005$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.005000	0.995025	200.000000	1.000000	0.995025	1.000000	1.005000
2	1.010025	0.990075	99.750623	2.005000	1.985099	0.498753	0.503753
3	1.015075	0.985149	66.334442	3.015025	2.970248	0.331672	0.336672
4	1.020151	0.980248	49.626559	4.030100	3.950496	0.248133	0.253133
5	1.025251	0.975371	39.601995	5.050251	4.925866	0.198010	0.203010
6	1.030378	0.970518	32.919091	6.075502	5.896384	0.164595	0.169595
7	1.035529	0.965690	28.145707	7.105879	6.862074	0.140729	0.145729
8	1.040707	0.960885	24.565773	8.141409	7.822959	0.122829	0.127829
9	1.045911	0.956105	21.781472	9.182116	8.779064	0.108907	0.113907
10	1.051140	0.951348	19.554115	10.228026	9.730412	0.097771	0.102771
11	1.056396	0.946615	17.731807	11.279167	10.677027	0.088659	0.093659
12	1.061678	0.941905	16.213286	12.335562	11.618932	0.081066	0.086066
13	1.066986	0.937219	14.928448	13.397240	12.556151	0.074642	0.079642
14	1.072321	0.932556	13.827217	14.464226	13.488708	0.069136	0.074136
15	1.077683	0.927917	12.872873	15.536548	14.416625	0.064364	0.069364
16	1.083071	0.923300	12.037873	16.614230	15.339925	0.060189	0.065189
17	1.088487	0.918707	11.301158	17.697301	16.258632	0.056506	0.061506
18	1.093929	0.914136	10.646346	18.785788	17.172768	0.053232	0.058232
19	1.099399	0.909588	10.060505	19.879717	18.082356	0.050303	0.055303
20	1.104896	0.905063	9.533290	20.979115	18.987419	0.047666	0.052666
21	1.110420	0.900560	9.056326	22.084011	19.887979	0.045282	0.050282
22	1.115972	0.896080	8.622759	23.194431	20.784059	0.043114	0.048114
23	1.121552	0.891622	8.226931	24.310403	21.675681	0.041135	0.046135
24	1.127160	0.887186	7.864122	25.431955	22.562866	0.039321	0.044321
25	1.132796	0.882772	7.530371	26.559115	23.445638	0.037652	0.042652
26	1.138460	0.878380	7.222326	27.691911	24.324018	0.036112	0.041112
27	1.144152	0.874010	6.937129	28.830370	25.198028	0.034686	0.039686
28	1.149873	0.869662	6.672333	29.974522	26.067689	0.033362	0.038362
29	1.155622	0.865335	6.425828	31.124395	26.933024	0.032129	0.037129
30	1.161400	0.861030	6.195784	32.280017	27.794054	0.030979	0.035979



$$i = 0.01 = 1\%; q = 1.01$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.010000	0.990099	100.000000	1.000000	0.990099	1.000000	1.010000
2	1.020100	0.980296	49.751244	2.010000	1.970395	0.497512	0.507512
3	1.030301	0.970590	33.002211	3.030100	2.940985	0.330022	0.340022
4	1.040604	0.960980	24.628109	4.060401	3.901966	0.246281	0.256281
5	1.051010	0.951466	19.603980	5.101005	4.853431	0.196040	0.206040
6	1.061520	0.942045	16.254837	6.152015	5.795476	0.162548	0.172548
7	1.072135	0.932718	13.862828	7.213535	6.728195	0.138628	0.148628
8	1.082857	0.923483	12.069029	8.285671	7.651678	0.120690	0.130690
9	1.093685	0.914340	10.674036	9.368527	8.566018	0.106740	0.116740
10	1.104622	0.905287	9.558208	10.462213	9.471305	0.095582	0.105582
11	1.115668	0.896324	8.645408	11.566835	10.367628	0.086454	0.096454
12	1.126825	0.887449	7.884879	12.682503	11.255077	0.078849	0.088849
13	1.138093	0.878663	7.241482	13.809328	12.133740	0.072415	0.082415
14	1.149474	0.869963	6.690117	14.947421	13.003703	0.066901	0.076901
15	1.160969	0.861349	6.212378	16.096896	13.865053	0.062124	0.072124
16	1.172579	0.852821	5.794460	17.257864	14.717874	0.057945	0.067945
17	1.184304	0.844377	5.425806	18.430443	15.562251	0.054258	0.064258
18	1.196147	0.836017	5.098205	19.614748	16.398269	0.050982	0.060982
19	1.208109	0.827740	4.805175	20.810895	17.226008	0.048052	0.058052
20	1.220190	0.819544	4.541531	22.019004	18.045553	0.045415	0.055415
21	1.232392	0.811430	4.303075	23.239194	18.856983	0.043031	0.053031
22	1.244716	0.803396	4.086372	24.471586	19.660379	0.040864	0.050864
23	1.257163	0.795442	3.888584	25.716302	20.455821	0.038886	0.048886
24	1.269735	0.787566	3.707347	26.973465	21.243387	0.037073	0.047073
25	1.282432	0.779768	3.540675	28.243200	22.023156	0.035407	0.045407
26	1.295256	0.772048	3.386888	29.525631	22.795204	0.033869	0.043869
27	1.308209	0.764404	3.244553	30.820888	23.559608	0.032446	0.042446
28	1.321291	0.756836	3.112444	32.129097	24.316443	0.031124	0.041124
29	1.334504	0.749342	2.989502	33.450388	25.065785	0.029895	0.039895
30	1.347849	0.741923	2.874811	34.784892	25.807708	0.028748	0.038748



$$i = 0.015 = 1.5\%; q = 1.015$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.015000	0.985222	66.666667	1.000000	0.985222	1.000000	1.015000
2	1.030225	0.970662	33.085194	2.015000	1.955883	0.496278	0.511278
3	1.045678	0.956317	21.892197	3.045225	2.912200	0.328383	0.343383
4	1.061364	0.942184	16.296319	4.090903	3.854385	0.244445	0.259445
5	1.077284	0.928260	12.939288	5.152267	4.782645	0.194089	0.209089
6	1.093443	0.914542	10.701681	6.229551	5.697187	0.160525	0.175525
7	1.109845	0.901027	9.103744	7.322994	6.598214	0.136556	0.151556
8	1.126493	0.887711	7.905602	8.432839	7.485925	0.118584	0.133584
9	1.143390	0.874592	6.973988	9.559332	8.360517	0.104610	0.119610
10	1.160541	0.861667	6.228945	10.702722	9.222185	0.093434	0.108434
11	1.177949	0.848933	5.619590	11.863262	10.071118	0.084294	0.099294
12	1.195618	0.836387	5.112000	13.041211	10.907505	0.076680	0.091680
13	1.213552	0.824027	4.682690	14.236830	11.731532	0.070240	0.085240
14	1.231756	0.811849	4.314888	15.450382	12.543382	0.064723	0.079723
15	1.250232	0.799852	3.996290	16.682138	13.343233	0.059944	0.074944
16	1.268986	0.788031	3.717672	17.932370	14.131264	0.055765	0.070765
17	1.288020	0.776385	3.471977	19.201355	14.907649	0.052080	0.067080
18	1.307341	0.764912	3.253719	20.489376	15.672561	0.048806	0.063806
19	1.326951	0.753607	3.058565	21.796716	16.426168	0.045878	0.060878
20	1.346855	0.742470	2.883049	23.123667	17.168639	0.043246	0.058246
21	1.367058	0.731498	2.724366	24.470522	17.900137	0.040865	0.055865
22	1.387564	0.720688	2.580221	25.837580	18.620824	0.038703	0.053703
23	1.408377	0.710037	2.448717	27.225144	19.330861	0.036731	0.051731
24	1.429503	0.699544	2.328273	28.633521	20.030405	0.034924	0.049924
25	1.450945	0.689206	2.217564	30.063024	20.719611	0.033263	0.048263
26	1.472710	0.679021	2.115464	31.513969	21.398632	0.031732	0.046732
27	1.494800	0.668986	2.021018	32.986678	22.067617	0.030315	0.045315
28	1.517222	0.659099	1.933405	34.481479	22.726717	0.029001	0.044001
29	1.539981	0.649359	1.851919	35.998701	23.376076	0.027779	0.042779
30	1.563080	0.639762	1.775946	37.538681	24.015838	0.026639	0.041639



$$i = 0.02 = 2\%; q = 1.02$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.020000	0.980392	50.000000	1.000000	0.980392	1.000000	1.020000
2	1.040400	0.961169	24.752475	2.020000	1.941561	0.495050	0.515050
3	1.061208	0.942322	16.337734	3.060400	2.883883	0.326755	0.346755
4	1.082432	0.923845	12.131188	4.121608	3.807729	0.242624	0.262624
5	1.104081	0.905731	9.607920	5.204040	4.713460	0.192158	0.212158
6	1.126162	0.887971	7.926291	6.308121	5.601431	0.158526	0.178526
7	1.148686	0.870560	6.725598	7.434283	6.471991	0.134512	0.154512
8	1.171659	0.853490	5.825490	8.582969	7.325481	0.116510	0.136510
9	1.195093	0.836755	5.125772	9.754628	8.162237	0.102515	0.122515
10	1.218994	0.820348	4.566326	10.949721	8.982585	0.091327	0.111327
11	1.243374	0.804263	4.108897	12.168715	9.786848	0.082178	0.102178
12	1.268242	0.788493	3.727980	13.412090	10.575341	0.074560	0.094560
13	1.293607	0.773033	3.405918	14.680332	11.348374	0.068118	0.088118
14	1.319479	0.757875	3.130099	15.973938	12.106249	0.062602	0.082602
15	1.345868	0.743015	2.891274	17.293417	12.849264	0.057825	0.077825
16	1.372786	0.728446	2.682506	18.639285	13.577709	0.053650	0.073650
17	1.400241	0.714163	2.498492	20.012071	14.291872	0.049970	0.069970
18	1.428246	0.700159	2.335105	21.412312	14.992031	0.046702	0.066702
19	1.456811	0.686431	2.189088	22.840559	15.678462	0.043782	0.063782
20	1.485947	0.672971	2.057836	24.297370	16.351433	0.041157	0.061157
21	1.515666	0.659776	1.939238	25.783317	17.011209	0.038785	0.058785
22	1.545980	0.646839	1.831570	27.298984	17.658048	0.036631	0.056631
23	1.576899	0.634156	1.733405	28.844963	18.292204	0.034668	0.054668
24	1.608437	0.621721	1.643555	30.421862	18.913926	0.032871	0.052871
25	1.640606	0.609531	1.561022	32.030300	19.523456	0.031220	0.051220
26	1.673418	0.597579	1.484962	33.670906	20.121036	0.029699	0.049699
27	1.706886	0.585862	1.414654	35.344324	20.706898	0.028293	0.048293
28	1.741024	0.574375	1.349484	37.051210	21.281272	0.026990	0.046990
29	1.775845	0.563112	1.288918	38.792235	21.844385	0.025778	0.045778
30	1.811362	0.552071	1.232496	40.568079	22.396456	0.024650	0.044650



$$i = 0.025 = 2.5\%; q = 1.025$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.025000	0.975610	40.000000	1.000000	0.975610	1.000000	1.025000
2	1.050625	0.951814	19.753086	2.025000	1.927424	0.493827	0.518827
3	1.076891	0.928599	13.005487	3.075625	2.856024	0.325137	0.350137
4	1.103813	0.905951	9.632715	4.152516	3.761974	0.240818	0.265818
5	1.131408	0.883854	7.609874	5.256329	4.645828	0.190247	0.215247
6	1.159693	0.862297	6.261999	6.387737	5.508125	0.156550	0.181550
7	1.188686	0.841265	5.299817	7.547430	6.349391	0.132495	0.157495
8	1.218403	0.820747	4.578694	8.736116	7.170137	0.114467	0.139467
9	1.248863	0.800728	4.018276	9.954519	7.970866	0.100457	0.125457
10	1.280085	0.781198	3.570351	11.203382	8.752064	0.089259	0.114259
11	1.312087	0.762145	3.204238	12.483466	9.514209	0.080106	0.105106
12	1.344889	0.743556	2.899485	13.795553	10.257765	0.072487	0.097487
13	1.378511	0.725420	2.641931	15.140442	10.983185	0.066048	0.091048
14	1.412974	0.707727	2.421461	16.518953	11.690912	0.060537	0.085537
15	1.448298	0.690466	2.230658	17.931927	12.381378	0.055766	0.080766
16	1.484506	0.673625	2.063960	19.380225	13.055003	0.051599	0.076599
17	1.521618	0.657195	1.917111	20.864730	13.712198	0.047928	0.072928
18	1.559659	0.641166	1.786803	22.386349	14.353364	0.044670	0.069670
19	1.598650	0.625528	1.670425	23.946007	14.978891	0.041761	0.066761
20	1.638616	0.610271	1.565885	25.544658	15.589162	0.039147	0.064147
21	1.679582	0.595386	1.471493	27.183274	16.184549	0.036787	0.061787
22	1.721571	0.580865	1.385864	28.862856	16.765413	0.034647	0.059647
23	1.764611	0.566697	1.307855	30.584427	17.332110	0.032696	0.057696
24	1.808726	0.552875	1.236513	32.349038	17.884986	0.030913	0.055913
25	1.853944	0.539391	1.171037	34.157764	18.424376	0.029276	0.054276
26	1.900293	0.526235	1.110750	36.011708	18.950611	0.027769	0.052769
27	1.947800	0.513400	1.055075	37.912001	19.464011	0.026377	0.051377
28	1.996495	0.500878	1.003517	39.859801	19.964889	0.025088	0.050088
29	2.046407	0.488661	0.955651	41.856296	20.453550	0.023891	0.048891
30	2.097568	0.476743	0.911106	43.902703	20.930293	0.022778	0.047778



$$i = 0.03 = 3\%; q = 1.03$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.030000	0.970874	33.333333	1.000000	0.970874	1.000000	1.030000
2	1.060900	0.942596	16.420361	2.030000	1.913470	0.492611	0.522611
3	1.092727	0.915142	10.784345	3.090900	2.828611	0.323530	0.353530
4	1.125509	0.888487	7.967568	4.183627	3.717098	0.239027	0.269027
5	1.159274	0.862609	6.278486	5.309136	4.579707	0.188355	0.218355
6	1.194052	0.837484	5.153250	6.468410	5.417191	0.154598	0.184598
7	1.229874	0.813092	4.350212	7.662462	6.230283	0.130506	0.160506
8	1.266770	0.789409	3.748546	8.892336	7.019692	0.112456	0.142456
9	1.304773	0.766417	3.281129	10.159106	7.786109	0.098434	0.128434
10	1.343916	0.744094	2.907684	11.463879	8.530203	0.087231	0.117231
11	1.384234	0.722421	2.602582	12.807796	9.252624	0.078077	0.108077
12	1.425761	0.701380	2.348736	14.192030	9.954004	0.070462	0.100462
13	1.468534	0.680951	2.134318	15.617790	10.634955	0.064030	0.094030
14	1.512590	0.661118	1.950878	17.086324	11.296073	0.058526	0.088526
15	1.557967	0.641862	1.792219	18.598914	11.937935	0.053767	0.083767
16	1.604706	0.623167	1.653695	20.156881	12.561102	0.049611	0.079611
17	1.652848	0.605016	1.531751	21.761588	13.166118	0.045953	0.075953
18	1.702433	0.587395	1.423623	23.414435	13.753513	0.042709	0.072709
19	1.753506	0.570286	1.327129	25.116868	14.323799	0.039814	0.069814
20	1.806111	0.553676	1.240524	26.870374	14.877475	0.037216	0.067216
21	1.860295	0.537549	1.162393	28.676486	15.415024	0.034872	0.064872
22	1.916103	0.521893	1.091580	30.536780	15.936917	0.032747	0.062747
23	1.973587	0.506692	1.027130	32.452884	16.443608	0.030814	0.060814
24	2.032794	0.491934	0.968247	34.426470	16.935542	0.029047	0.059047
25	2.093778	0.477606	0.914262	36.459264	17.413148	0.027428	0.057428
26	2.156591	0.463695	0.864610	38.553042	17.876842	0.025938	0.055938
27	2.221289	0.450189	0.818807	40.709634	18.327031	0.024564	0.054564
28	2.287928	0.437077	0.776441	42.930923	18.764108	0.023293	0.053293
29	2.356566	0.424346	0.737156	45.218850	19.188455	0.022115	0.052115
30	2.427262	0.411987	0.700642	47.575416	19.600441	0.021019	0.051019



$$i = 0.035 = 3.5\%; q = 1.035$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.035000	0.966184	28.571429	1.000000	0.966184	1.000000	1.035000
2	1.071225	0.933511	14.040014	2.035000	1.899694	0.491400	0.526400
3	1.108718	0.901943	9.198119	3.106225	2.801637	0.321934	0.356934
4	1.147523	0.871442	6.778604	4.214943	3.673079	0.237251	0.272251
5	1.187686	0.841973	5.328039	5.362466	4.515052	0.186481	0.221481
6	1.229255	0.813501	4.361949	6.550152	5.328553	0.152668	0.187668
7	1.272279	0.785991	3.672700	7.779408	6.114544	0.128544	0.163544
8	1.316809	0.759412	3.156476	9.051687	6.873956	0.110477	0.145477
9	1.362897	0.733731	2.755600	10.368496	7.607687	0.096446	0.131446
10	1.410599	0.708919	2.435468	11.731393	8.316605	0.085241	0.120241
11	1.459970	0.684946	2.174056	13.141992	9.001551	0.076092	0.111092
12	1.511069	0.661783	1.956684	14.601962	9.663334	0.068484	0.103484
13	1.563956	0.639404	1.773188	16.113030	10.302738	0.062062	0.097062
14	1.618695	0.617782	1.616307	17.676986	10.920520	0.056571	0.091571
15	1.675349	0.596891	1.480716	19.295681	11.517411	0.051825	0.086825
16	1.733986	0.576706	1.362424	20.971030	12.094117	0.047685	0.082685
17	1.794676	0.557204	1.258375	22.705016	12.651321	0.044043	0.079043
18	1.857489	0.538361	1.166195	24.499691	13.189682	0.040817	0.075817
19	1.922501	0.520156	1.084009	26.357180	13.709837	0.037940	0.072940
20	1.989789	0.502566	1.010316	28.279682	14.212403	0.035361	0.070361
21	2.059431	0.485571	0.943902	30.269471	14.697974	0.033037	0.068037
22	2.131512	0.469151	0.883774	32.328902	15.167125	0.030932	0.065932
23	2.206114	0.453286	0.829109	34.460414	15.620410	0.029019	0.064019
24	2.283328	0.437957	0.779224	36.666528	16.058368	0.027273	0.062273
25	2.363245	0.423147	0.733544	38.949857	16.481515	0.025674	0.060674
26	2.445959	0.408838	0.691583	41.313102	16.890352	0.024205	0.059205
27	2.531567	0.395012	0.652926	43.759060	17.285365	0.022852	0.057852
28	2.620172	0.381654	0.617218	46.290627	17.667019	0.021603	0.056603
29	2.711878	0.368748	0.584154	48.910799	18.035767	0.020445	0.055445
30	2.806794	0.356278	0.553467	51.622677	18.392045	0.019371	0.054371



$$i = 0.04 = 4\%; q = 1.04$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.040000	0.961538	25.000000	1.000000	0.961538	1.000000	1.040000
2	1.081600	0.924556	12.254902	2.040000	1.886095	0.490196	0.530196
3	1.124864	0.888996	8.008713	3.121600	2.775091	0.320349	0.360349
4	1.169859	0.854804	5.887251	4.246464	3.629895	0.235490	0.275490
5	1.216653	0.821927	4.615678	5.416323	4.451822	0.184627	0.224627
6	1.265319	0.790315	3.769048	6.632975	5.242137	0.150762	0.190762
7	1.315932	0.759918	3.165240	7.898294	6.002055	0.126610	0.166610
8	1.368569	0.730690	2.713196	9.214226	6.732745	0.108528	0.148528
9	1.423312	0.702587	2.362325	10.582795	7.435332	0.094493	0.134493
10	1.480244	0.675564	2.082274	12.006107	8.110896	0.083291	0.123291
11	1.539454	0.649581	1.853726	13.486351	8.760477	0.074149	0.114149
12	1.601032	0.624597	1.663804	15.025805	9.385074	0.066552	0.106552
13	1.665074	0.600574	1.503593	16.626838	9.985648	0.060144	0.100144
14	1.731676	0.577475	1.366724	18.291911	10.563123	0.054669	0.094669
15	1.800944	0.555265	1.248528	20.023588	11.118387	0.049941	0.089941
16	1.872981	0.533908	1.145500	21.824531	11.652296	0.045820	0.085820
17	1.947900	0.513373	1.054963	23.697512	12.165669	0.042199	0.082199
18	2.025817	0.493628	0.974833	25.645413	12.659297	0.038993	0.078993
19	2.106849	0.474642	0.903465	27.671229	13.133939	0.036139	0.076139
20	2.191123	0.456387	0.839544	29.778079	13.590326	0.033582	0.073582
21	2.278768	0.438834	0.782003	31.969202	14.029160	0.031280	0.071280
22	2.369919	0.421955	0.729970	34.247970	14.451115	0.029199	0.069199
23	2.464716	0.405726	0.682726	36.617889	14.856842	0.027309	0.067309
24	2.563304	0.390121	0.639671	39.082604	15.246963	0.025587	0.065587
25	2.665836	0.375117	0.600299	41.645908	15.622080	0.024012	0.064012
26	2.772470	0.360689	0.564185	44.311745	15.982769	0.022567	0.062567
27	2.883369	0.346817	0.530964	47.084214	16.329586	0.021239	0.061239
28	2.998703	0.333477	0.500324	49.967583	16.663063	0.020013	0.060013
29	3.118651	0.320651	0.471998	52.966286	16.983715	0.018880	0.058880
30	3.243398	0.308319	0.445752	56.084938	17.292033	0.017830	0.057830



$$i = 0.045 = 4.5\%; q = 1.045$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.045000	0.956938	22.222222	1.000000	0.956938	1.000000	1.045000
2	1.092025	0.915730	10.866612	2.045000	1.872668	0.488998	0.533998
3	1.141166	0.876297	7.083852	3.137025	2.748964	0.318773	0.363773
4	1.192519	0.838561	5.194303	4.278191	3.587526	0.233744	0.278744
5	1.246182	0.802451	4.062036	5.470710	4.389977	0.182792	0.227792
6	1.302260	0.767896	3.308409	6.716892	5.157872	0.148878	0.193878
7	1.360862	0.734828	2.771144	8.019152	5.892701	0.124701	0.169701
8	1.422101	0.703185	2.369103	9.380014	6.595886	0.106610	0.151610
9	1.486095	0.672904	2.057210	10.802114	7.268790	0.092574	0.137574
10	1.552969	0.643928	1.808418	12.288209	7.912718	0.081379	0.126379
11	1.622853	0.616199	1.605515	13.841179	8.528917	0.072248	0.117248
12	1.695881	0.589664	1.437026	15.464032	9.118581	0.064666	0.109666
13	1.772196	0.564272	1.295008	17.159913	9.682852	0.058275	0.103275
14	1.851945	0.539973	1.173785	18.932109	10.222825	0.052820	0.097820
15	1.935282	0.516720	1.069196	20.784054	10.739546	0.048114	0.093114
16	2.022370	0.494469	0.978119	22.719337	11.234015	0.044015	0.089015
17	2.113377	0.473176	0.898169	24.741707	11.707191	0.040418	0.085418
18	2.208479	0.452800	0.827487	26.855084	12.159992	0.037237	0.082237
19	2.307860	0.433302	0.764608	29.063562	12.593294	0.034407	0.079407
20	2.411714	0.414643	0.708359	31.371423	13.007936	0.031876	0.076876
21	2.520241	0.396787	0.657790	33.783137	13.404724	0.029601	0.074601
22	2.633652	0.379701	0.612125	36.303378	13.784425	0.027546	0.072546
23	2.752166	0.363350	0.570722	38.937030	14.147775	0.025682	0.070682
24	2.876014	0.347703	0.533045	41.689196	14.495478	0.023987	0.068987
25	3.005434	0.332731	0.498645	44.565210	14.828209	0.022439	0.067439
26	3.140679	0.318402	0.467141	47.570645	15.146611	0.021021	0.066021
27	3.282010	0.304691	0.438210	50.711324	15.451303	0.019719	0.064719
28	3.429700	0.291571	0.411573	53.993333	15.742874	0.018521	0.063521
29	3.584036	0.279015	0.386991	57.423033	16.021889	0.017415	0.062415
30	3.745318	0.267000	0.364257	61.007070	16.288889	0.016392	0.061392



$$i = 0.05 = 5\%; q = 1.05$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.050000	0.952381	20.000000	1.000000	0.952381	1.000000	1.050000
2	1.102500	0.907029	9.756098	2.050000	1.859410	0.487805	0.537805
3	1.157625	0.863838	6.344171	3.152500	2.723248	0.317209	0.367209
4	1.215506	0.822702	4.640237	4.310125	3.545951	0.232012	0.282012
5	1.276282	0.783526	3.619496	5.525631	4.329477	0.180975	0.230975
6	1.340096	0.746215	2.940349	6.801913	5.075692	0.147017	0.197017
7	1.407100	0.710681	2.456396	8.142008	5.786373	0.122820	0.172820
8	1.477455	0.676839	2.094436	9.549109	6.463213	0.104722	0.154722
9	1.551328	0.644609	1.813802	11.026564	7.107822	0.090690	0.140690
10	1.628895	0.613913	1.590091	12.577893	7.721735	0.079505	0.129505
11	1.710339	0.584679	1.407778	14.206787	8.306414	0.070389	0.120389
12	1.795856	0.556837	1.256508	15.917127	8.863252	0.062825	0.112825
13	1.885649	0.530321	1.129115	17.712983	9.393573	0.056456	0.106456
14	1.979932	0.505068	1.020479	19.598632	9.898641	0.051024	0.101024
15	2.078928	0.481017	0.926846	21.578564	10.379658	0.046342	0.096342
16	2.182875	0.458112	0.845398	23.657492	10.837770	0.042270	0.092270
17	2.292018	0.436297	0.773983	25.840366	11.274066	0.038699	0.088699
18	2.406619	0.415521	0.710924	28.132385	11.689587	0.035546	0.085546
19	2.526950	0.395734	0.654900	30.539004	12.085321	0.032745	0.082745
20	2.653298	0.376889	0.604852	33.065954	12.462210	0.030243	0.080243
21	2.785963	0.358942	0.559922	35.719252	12.821153	0.027996	0.077996
22	2.925261	0.341850	0.519410	38.505214	13.163003	0.025971	0.075971
23	3.071524	0.325571	0.482736	41.430475	13.488574	0.024137	0.074137
24	3.225100	0.310068	0.449418	44.501999	13.798642	0.022471	0.072471
25	3.386355	0.295303	0.419049	47.727099	14.093945	0.020952	0.070952
26	3.555673	0.281241	0.391286	51.113454	14.375185	0.019564	0.069564
27	3.733456	0.267848	0.365837	54.669126	14.643034	0.018292	0.068292
28	3.920129	0.255094	0.342451	58.402583	14.898127	0.017123	0.067123
29	4.116136	0.242946	0.320910	62.322712	15.141074	0.016046	0.066046
30	4.321942	0.231377	0.301029	66.438848	15.372451	0.015051	0.065051



$$i = 0.055 = 5.5\%; q = 1.055$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.055000	0.947867	18.181818	1.000000	0.947867	1.000000	1.055000
2	1.113025	0.898452	8.847600	2.055000	1.846320	0.486618	0.541618
3	1.174241	0.851614	5.739165	3.168025	2.697933	0.315654	0.370654
4	1.238825	0.807217	4.187172	4.342266	3.505150	0.230294	0.285294
5	1.306960	0.765134	3.257753	5.581091	4.270284	0.179176	0.234176
6	1.378843	0.725246	2.639617	6.888051	4.995530	0.145179	0.200179
7	1.454679	0.687437	2.199353	8.266894	5.682967	0.120964	0.175964
8	1.534687	0.651599	1.870255	9.721573	6.334566	0.102864	0.157864
9	1.619094	0.617629	1.615263	11.256260	6.952195	0.088839	0.143839
10	1.708144	0.585431	1.412141	12.875354	7.537626	0.077668	0.132668
11	1.802092	0.554911	1.246739	14.583498	8.092536	0.068571	0.123571
12	1.901207	0.525982	1.109622	16.385591	8.618518	0.061029	0.116029
13	2.005774	0.498561	0.994259	18.286798	9.117079	0.054684	0.109684
14	2.116091	0.472569	0.895984	20.292572	9.589648	0.049279	0.104279
15	2.232476	0.447933	0.811375	22.408663	10.037581	0.044626	0.099626
16	2.355263	0.424581	0.737864	24.641140	10.462162	0.040583	0.095583
17	2.484802	0.402447	0.673490	26.996403	10.864609	0.037042	0.092042
18	2.621466	0.381466	0.616726	29.481205	11.246074	0.033920	0.088920
19	2.765647	0.361579	0.566365	32.102671	11.607654	0.031150	0.086150
20	2.917757	0.342729	0.521442	34.868318	11.950382	0.028679	0.083679
21	3.078234	0.324862	0.481178	37.786076	12.275244	0.026465	0.081465
22	3.247537	0.307926	0.444931	40.864310	12.583170	0.024471	0.079471
23	3.426152	0.291873	0.412175	44.111847	12.875042	0.022670	0.077670
24	3.614590	0.276657	0.382469	47.537998	13.151699	0.021036	0.076036
25	3.813392	0.262234	0.355443	51.152588	13.413933	0.019549	0.074549
26	4.023129	0.248563	0.330783	54.965981	13.662495	0.018193	0.073193
27	4.244401	0.235605	0.308223	58.989109	13.898100	0.016952	0.071952
28	4.477843	0.223322	0.287535	63.233510	14.121422	0.015814	0.070814
29	4.724124	0.211679	0.268519	67.711354	14.333101	0.014769	0.069769
30	4.983951	0.200644	0.251007	72.435478	14.533745	0.013805	0.068805



$$i = 0.06 = 6\%; q = 1.06$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.060000	0.943396	16.666667	1.000000	0.943396	1.000000	1.060000
2	1.123600	0.889996	8.090615	2.060000	1.833393	0.485437	0.545437
3	1.191016	0.839619	5.235164	3.183600	2.673012	0.314110	0.374110
4	1.262477	0.792094	3.809858	4.374616	3.465106	0.228591	0.288591
5	1.338226	0.747258	2.956607	5.637093	4.212364	0.177396	0.237396
6	1.418519	0.704961	2.389377	6.975319	4.917324	0.143363	0.203363
7	1.503630	0.665057	1.985584	8.393838	5.582381	0.119135	0.179135
8	1.593848	0.627412	1.683932	9.897468	6.209794	0.101036	0.161036
9	1.689479	0.591898	1.450371	11.491316	6.801692	0.087022	0.147022
10	1.790848	0.558395	1.264466	13.180795	7.360087	0.075868	0.135868
11	1.898299	0.526788	1.113216	14.971643	7.886875	0.066793	0.126793
12	2.012196	0.496969	0.987950	16.869941	8.383844	0.059277	0.119277
13	2.132928	0.468839	0.882668	18.882138	8.852683	0.052960	0.112960
14	2.260904	0.442301	0.793082	21.015066	9.294984	0.047585	0.107585
15	2.396558	0.417265	0.716046	23.275970	9.712249	0.042963	0.102963
16	2.540352	0.393646	0.649202	25.672528	10.105895	0.038952	0.098952
17	2.692773	0.371364	0.590747	28.212880	10.477260	0.035445	0.095445
18	2.854339	0.350344	0.539276	30.905653	10.827603	0.032357	0.092357
19	3.025600	0.330513	0.493681	33.759992	11.158116	0.029621	0.089621
20	3.207135	0.311805	0.453076	36.785591	11.469921	0.027185	0.087185
21	3.399564	0.294155	0.416742	39.992727	11.764077	0.025005	0.085005
22	3.603537	0.277505	0.384093	43.392290	12.041582	0.023046	0.083046
23	3.819750	0.261797	0.354641	46.995828	12.303379	0.021278	0.081278
24	4.048935	0.246979	0.327983	50.815577	12.550358	0.019679	0.079679
25	4.291871	0.232999	0.303779	54.864512	12.783356	0.018227	0.078227
26	4.549383	0.219810	0.281739	59.156383	13.003166	0.016904	0.076904
27	4.822346	0.207368	0.261619	63.705766	13.210534	0.015697	0.075697
28	5.111687	0.195630	0.243209	68.528112	13.406164	0.014593	0.074593
29	5.418388	0.184557	0.226327	73.639798	13.590721	0.013580	0.073580
30	5.743491	0.174110	0.210815	79.058186	13.764831	0.012649	0.072649



$$i = 0.065 = 6.5\%; q = 1.065$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.065000	0.938967	15.384615	1.000000	0.938967	1.000000	1.065000
2	1.134225	0.881659	7.450177	2.065000	1.820626	0.484262	0.549262
3	1.207950	0.827849	4.808857	3.199225	2.648476	0.312576	0.377576
4	1.286466	0.777323	3.490811	4.407175	3.425799	0.226903	0.291903
5	1.370087	0.729881	2.702070	5.693641	4.155679	0.175635	0.240635
6	1.459142	0.685334	2.177974	7.063728	4.841014	0.141568	0.206568
7	1.553987	0.643506	1.805098	8.522870	5.484520	0.117331	0.182331
8	1.654996	0.604231	1.526728	10.076856	6.088751	0.099237	0.164237
9	1.762570	0.567353	1.311354	11.731852	6.656104	0.085238	0.150238
10	1.877137	0.532726	1.140072	13.494423	7.188830	0.074105	0.139105
11	1.999151	0.500212	1.000849	15.371560	7.689042	0.065055	0.130055
12	2.129096	0.469683	0.885664	17.370711	8.158725	0.057568	0.122568
13	2.267487	0.441017	0.788962	19.499808	8.599742	0.051283	0.116283
14	2.414874	0.414100	0.706777	21.767295	9.013842	0.045940	0.110940
15	2.571841	0.388827	0.636197	24.182169	9.402669	0.041353	0.106353
16	2.739011	0.365095	0.575040	26.754010	9.767764	0.037378	0.102378
17	2.917046	0.342813	0.521636	29.493021	10.110577	0.033906	0.098906
18	3.106654	0.321890	0.474686	32.410067	10.432466	0.030855	0.095855
19	3.308587	0.302244	0.433165	35.516722	10.734710	0.028156	0.093156
20	3.523645	0.283797	0.396252	38.825309	11.018507	0.025756	0.090756
21	3.752682	0.266476	0.363282	42.348954	11.284983	0.023613	0.088613
22	3.996606	0.250212	0.333711	46.101636	11.535196	0.021691	0.086691
23	4.256386	0.234941	0.307089	50.098242	11.770137	0.019961	0.084961
24	4.533051	0.220602	0.283042	54.354628	11.990739	0.018398	0.083398
25	4.827699	0.207138	0.261254	58.887679	12.197877	0.016981	0.081981
26	5.141500	0.194496	0.241458	63.715378	12.392373	0.015695	0.080695
27	5.475697	0.182625	0.223429	68.856877	12.574998	0.014523	0.079523
28	5.831617	0.171479	0.206970	74.332574	12.746477	0.013453	0.078453
29	6.210672	0.161013	0.191914	80.164192	12.907490	0.012474	0.077474
30	6.614366	0.151186	0.178114	86.374864	13.058676	0.011577	0.076577



$$i = 0.07 = 7\%; q = 1.07$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.070000	0.934579	14.285714	1.000000	0.934579	1.000000	1.070000
2	1.144900	0.873439	6.901311	2.070000	1.808018	0.483092	0.553092
3	1.225043	0.816298	4.443595	3.214900	2.624316	0.311052	0.381052
4	1.310796	0.762895	3.217545	4.439943	3.387211	0.225228	0.295228
5	1.402552	0.712986	2.484153	5.750739	4.100197	0.173891	0.243891
6	1.500730	0.666342	1.997083	7.153291	4.766540	0.139796	0.209796
7	1.605781	0.622750	1.650760	8.654021	5.389289	0.115553	0.185553
8	1.718186	0.582009	1.392397	10.259803	5.971299	0.097468	0.167468
9	1.838459	0.543934	1.192664	11.977989	6.515232	0.083486	0.153486
10	1.967151	0.508349	1.033964	13.816448	7.023582	0.072378	0.142378
11	2.104852	0.475093	0.905099	15.783599	7.498674	0.063357	0.133357
12	2.252192	0.444012	0.798600	17.888451	7.942686	0.055902	0.125902
13	2.409845	0.414964	0.709298	20.140643	8.357651	0.049651	0.119651
14	2.578534	0.387817	0.633499	22.550488	8.745468	0.044345	0.114345
15	2.759032	0.362446	0.568495	25.129022	9.107914	0.039795	0.109795
16	2.952164	0.338735	0.512252	27.888054	9.446649	0.035858	0.105858
17	3.158815	0.316574	0.463217	30.840217	9.763223	0.032425	0.102425
18	3.379932	0.295864	0.420180	33.999033	10.059087	0.029413	0.099413
19	3.616528	0.276508	0.382186	37.378965	10.335595	0.026753	0.096753
20	3.869684	0.258419	0.348470	40.995492	10.594014	0.024393	0.094393
21	4.140562	0.241513	0.318414	44.865177	10.835527	0.022289	0.092289
22	4.430402	0.225713	0.291511	49.005739	11.061240	0.020406	0.090406
23	4.740530	0.210947	0.267342	53.436141	11.272187	0.018714	0.088714
24	5.072367	0.197147	0.245557	58.176671	11.469334	0.017189	0.087189
25	5.427433	0.184249	0.225865	63.249038	11.653583	0.015811	0.085811
26	5.807353	0.172195	0.208015	68.676470	11.825779	0.014561	0.084561
27	6.213868	0.160930	0.191796	74.483823	11.986709	0.013426	0.083426
28	6.648838	0.150402	0.177028	80.697691	12.137111	0.012392	0.082392
29	7.114257	0.140563	0.163552	87.346529	12.277674	0.011449	0.081449
30	7.612255	0.131367	0.151234	94.460786	12.409041	0.010586	0.080586



$$i = 0.075 = 7.5\%; q = 1.075$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.075000	0.930233	13.333333	1.000000	0.930233	1.000000	1.075000
2	1.155625	0.865333	6.425703	2.075000	1.795565	0.481928	0.556928
3	1.242297	0.804961	4.127168	3.230625	2.600526	0.309538	0.384538
4	1.335469	0.748801	2.980900	4.472922	3.349326	0.223568	0.298568
5	1.435629	0.696559	2.295530	5.808391	4.045885	0.172165	0.247165
6	1.543302	0.647962	1.840599	7.244020	4.693846	0.138045	0.213045
7	1.659049	0.602755	1.517338	8.787322	5.296601	0.113800	0.188800
8	1.783478	0.560702	1.276360	10.446371	5.857304	0.095727	0.170727
9	1.917239	0.521583	1.090229	12.229849	6.378887	0.081767	0.156767
10	2.061032	0.485194	0.942479	14.147087	6.864081	0.070686	0.145686
11	2.215609	0.451343	0.822633	16.208119	7.315424	0.061697	0.136697
12	2.381780	0.419854	0.723704	18.423728	7.735278	0.054278	0.129278
13	2.560413	0.390562	0.640856	20.805508	8.125840	0.048064	0.123064
14	2.752444	0.363313	0.570632	23.365921	8.489154	0.042797	0.117797
15	2.958877	0.337966	0.510496	26.118365	8.827120	0.038287	0.113287
16	3.180793	0.314387	0.458549	29.077242	9.141507	0.034391	0.109391
17	3.419353	0.292453	0.413334	32.258035	9.433960	0.031000	0.106000
18	3.675804	0.272049	0.373719	35.677388	9.706009	0.028029	0.103029
19	3.951489	0.253069	0.338812	39.353192	9.959078	0.025411	0.100411
20	4.247851	0.235413	0.307896	43.304681	10.194491	0.023092	0.098092
21	4.566440	0.218989	0.280392	47.552532	10.413480	0.021029	0.096029
22	4.908923	0.203711	0.255825	52.118972	10.617191	0.019187	0.094187
23	5.277092	0.189498	0.233804	57.027895	10.806689	0.017535	0.092535
24	5.672874	0.176277	0.214001	62.304987	10.982967	0.016050	0.091050
25	6.098340	0.163979	0.196142	67.977862	11.146946	0.014711	0.089711
26	6.555715	0.152539	0.179995	74.076201	11.299485	0.013500	0.088500
27	7.047394	0.141896	0.165360	80.631916	11.441381	0.012402	0.087402
28	7.575948	0.131997	0.152069	87.679310	11.573378	0.011405	0.086405
29	8.144144	0.122788	0.139975	95.255258	11.696165	0.010498	0.085498
30	8.754955	0.114221	0.128950	103.399403	11.810386	0.009671	0.084671



$$i = 0.08 = 8\%; q = 1.08$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.080000	0.925926	12.500000	1.000000	0.925926	1.000000	1.080000
2	1.166400	0.857339	6.009615	2.080000	1.783265	0.480769	0.560769
3	1.259712	0.793832	3.850419	3.246400	2.577097	0.308034	0.388034
4	1.360489	0.735030	2.774010	4.506112	3.312127	0.221921	0.301921
5	1.469328	0.680583	2.130706	5.866601	3.992710	0.170456	0.250456
6	1.586874	0.630170	1.703942	7.335929	4.622880	0.136315	0.216315
7	1.713824	0.583490	1.400905	8.922803	5.206370	0.112072	0.192072
8	1.850930	0.540269	1.175185	10.636628	5.746639	0.094015	0.174015
9	1.999005	0.500249	1.000996	12.487558	6.246888	0.080080	0.160080
10	2.158925	0.463193	0.862869	14.486562	6.710081	0.069029	0.149029
11	2.331639	0.428883	0.750954	16.645487	7.138964	0.060076	0.140076
12	2.518170	0.397114	0.658688	18.977126	7.536078	0.052695	0.132695
13	2.719624	0.367698	0.581523	21.495297	7.903776	0.046522	0.126522
14	2.937194	0.340461	0.516211	24.214920	8.244237	0.041297	0.121297
15	3.172169	0.315242	0.460369	27.152114	8.559479	0.036830	0.116830
16	3.425943	0.291890	0.412211	30.324283	8.851369	0.032977	0.112977
17	3.700018	0.270269	0.370368	33.750226	9.121638	0.029629	0.109629
18	3.996019	0.250249	0.333776	37.450244	9.371887	0.026702	0.106702
19	4.315701	0.231712	0.301595	41.446263	9.603599	0.024128	0.104128
20	4.660957	0.214548	0.273153	45.761964	9.818147	0.021852	0.101852
21	5.033834	0.198656	0.247903	50.422921	10.016803	0.019832	0.099832
22	5.436540	0.183941	0.225401	55.456755	10.200744	0.018032	0.098032
23	5.871464	0.170315	0.205277	60.893296	10.371059	0.016422	0.096422
24	6.341181	0.157699	0.187225	66.764759	10.528758	0.014978	0.094978
25	6.848475	0.146018	0.170985	73.105940	10.674776	0.013679	0.093679
26	7.396353	0.135202	0.156339	79.954415	10.809978	0.012507	0.092507
27	7.988061	0.125187	0.143101	87.350768	10.935165	0.011448	0.091448
28	8.627106	0.115914	0.131111	95.338830	11.051078	0.010489	0.090489
29	9.317275	0.107328	0.120232	103.965936	11.158406	0.009619	0.089619
30	10.062657	0.099377	0.110343	113.283211	11.257783	0.008827	0.088827



$$i = 0.085 = 8.5\%; q = 1.085$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.085000	0.921659	11.764706	1.000000	0.921659	1.000000	1.085000
2	1.177225	0.849455	5.642545	2.085000	1.771114	0.479616	0.564616
3	1.277289	0.782908	3.606344	3.262225	2.554022	0.306539	0.391539
4	1.385859	0.721574	2.591622	4.539514	3.275597	0.220288	0.305288
5	1.503657	0.665045	1.985479	5.925373	3.940642	0.168766	0.253766
6	1.631468	0.612945	1.583613	7.429030	4.553587	0.134607	0.219607
7	1.770142	0.564926	1.298461	9.060497	5.118514	0.110369	0.195369
8	1.920604	0.520669	1.086243	10.830639	5.639183	0.092331	0.177331
9	2.083856	0.479880	0.922632	12.751244	6.119063	0.078424	0.163424
10	2.260983	0.442285	0.793032	14.835099	6.561348	0.067408	0.152408
11	2.453167	0.407636	0.688152	17.096083	6.968984	0.058493	0.143493
12	2.661686	0.375702	0.601798	19.549250	7.344686	0.051153	0.136153
13	2.887930	0.346269	0.529681	22.210936	7.690955	0.045023	0.130023
14	3.133404	0.319142	0.468735	25.098866	8.010097	0.039842	0.124842
15	3.399743	0.294140	0.416711	28.232269	8.304237	0.035420	0.120420
16	3.688721	0.271097	0.371924	31.632012	8.575333	0.031614	0.116614
17	4.002262	0.249859	0.333082	35.320733	8.825192	0.028312	0.113312
18	4.342455	0.230285	0.299181	39.322995	9.055476	0.025430	0.110430
19	4.711563	0.212244	0.269428	43.665450	9.267720	0.022901	0.107901
20	5.112046	0.195616	0.243188	48.377013	9.463337	0.020671	0.105671
21	5.546570	0.180292	0.219946	53.489059	9.643628	0.018695	0.103695
22	6.018028	0.166167	0.199281	59.035629	9.809796	0.016939	0.101939
23	6.529561	0.153150	0.180846	65.053658	9.962945	0.015372	0.100372
24	7.084574	0.141152	0.164350	71.583219	10.104097	0.013970	0.098970
25	7.686762	0.130094	0.149549	78.667792	10.234191	0.012712	0.097712
26	8.340137	0.119902	0.136237	86.354555	10.354093	0.011580	0.096580
27	9.049049	0.110509	0.124238	94.694692	10.464602	0.010560	0.095560
28	9.818218	0.101851	0.113402	103.743741	10.566453	0.009639	0.094639
29	10.652766	0.093872	0.103597	113.561959	10.660326	0.008806	0.093806
30	11.558252	0.086518	0.094713	124.214725	10.746844	0.008051	0.093051



$$i = 0.09 = 9\%; q = 1.09$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.090000	0.917431	11.111111	1.000000	0.917431	1.000000	1.090000
2	1.188100	0.841680	5.316321	2.090000	1.759111	0.478469	0.568469
3	1.295029	0.772183	3.389497	3.278100	2.531295	0.305055	0.395055
4	1.411582	0.708425	2.429652	4.573129	3.239720	0.218669	0.308669
5	1.538624	0.649931	1.856583	5.984711	3.889651	0.167092	0.257092
6	1.677100	0.596267	1.476886	7.523335	4.485919	0.132920	0.222920
7	1.828039	0.547034	1.207672	9.200435	5.032953	0.108691	0.198691
8	1.992563	0.501866	1.007493	11.028474	5.534819	0.090674	0.180674
9	2.171893	0.460428	0.853320	13.021036	5.995247	0.076799	0.166799
10	2.367364	0.422411	0.731334	15.192930	6.417658	0.065820	0.155820
11	2.580426	0.387533	0.632741	17.560293	6.805191	0.056947	0.146947
12	2.812665	0.355535	0.551674	20.140720	7.160725	0.049651	0.139651
13	3.065805	0.326179	0.484073	22.953385	7.486904	0.043567	0.133567
14	3.341727	0.299246	0.427035	26.019189	7.786150	0.038433	0.128433
15	3.642482	0.274538	0.378432	29.360916	8.060688	0.034059	0.124059
16	3.970306	0.251870	0.336666	33.003399	8.312558	0.030300	0.120300
17	4.327633	0.231073	0.300514	36.973705	8.543631	0.027046	0.117046
18	4.717120	0.211994	0.269025	41.301338	8.755625	0.024212	0.114212
19	5.141661	0.194490	0.241449	46.018458	8.950115	0.021730	0.111730
20	5.604411	0.178431	0.217183	51.160120	9.128546	0.019546	0.109546
21	6.108808	0.163698	0.195740	56.764530	9.292244	0.017617	0.107617
22	6.658600	0.150182	0.176722	62.873338	9.442425	0.015905	0.105905
23	7.257874	0.137781	0.159799	69.531939	9.580207	0.014382	0.104382
24	7.911083	0.126405	0.144695	76.789813	9.706612	0.013023	0.103023
25	8.623081	0.115968	0.131181	84.700896	9.822580	0.011806	0.101806
26	9.399158	0.106393	0.119060	93.323977	9.928972	0.010715	0.100715
27	10.245082	0.097608	0.108166	102.723135	10.026580	0.009735	0.099735
28	11.167140	0.089548	0.098356	112.968217	10.116128	0.008852	0.098852
29	12.172182	0.082155	0.089508	124.135356	10.198283	0.008056	0.098056
30	13.267678	0.075371	0.081515	136.307539	10.273654	0.007336	0.097336



$$i = 0.095 = 9.5\%; q = 1.095$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.095000	0.913242	10.526316	1.000000	0.913242	1.000000	1.095000
2	1.199025	0.834011	5.024494	2.095000	1.747253	0.477327	0.572327
3	1.312932	0.761654	3.195579	3.294025	2.508907	0.303580	0.398580
4	1.437661	0.695574	2.284874	4.606957	3.204481	0.217063	0.312063
5	1.574239	0.635228	1.741436	6.044618	3.839709	0.165436	0.260436
6	1.723791	0.580117	1.381614	7.618857	4.419825	0.131253	0.226253
7	1.887552	0.529787	1.126695	9.342648	4.949612	0.107036	0.202036
8	2.066869	0.483824	0.937322	11.230200	5.433436	0.089046	0.184046
9	2.263222	0.441848	0.791627	13.297069	5.875284	0.075205	0.170205
10	2.478228	0.403514	0.676486	15.560291	6.278798	0.064266	0.159266
11	2.713659	0.368506	0.583547	18.038518	6.647304	0.055437	0.150437
12	2.971457	0.336535	0.507239	20.752178	6.983839	0.048188	0.143188
13	3.253745	0.307338	0.443706	23.723634	7.291178	0.042152	0.137152
14	3.562851	0.280674	0.390190	26.977380	7.571852	0.037068	0.132068
15	3.901322	0.256323	0.344670	30.540231	7.828175	0.032744	0.127744
16	4.271948	0.234085	0.305628	34.441553	8.062260	0.029035	0.124035
17	4.677783	0.213777	0.271903	38.713500	8.276037	0.025831	0.120831
18	5.122172	0.195230	0.242591	43.391283	8.471266	0.023046	0.118046
19	5.608778	0.178292	0.216977	48.513454	8.649558	0.020613	0.115613
20	6.141612	0.162824	0.194492	54.122233	8.812382	0.018477	0.113477
21	6.725065	0.148697	0.174670	60.263845	8.961080	0.016594	0.111594
22	7.363946	0.135797	0.157135	66.988910	9.096876	0.014928	0.109928
23	8.063521	0.124015	0.141572	74.352856	9.220892	0.013449	0.108449
24	8.829556	0.113256	0.127721	82.416378	9.334148	0.012134	0.107134
25	9.668364	0.103430	0.115362	91.245934	9.437578	0.010959	0.105959
26	10.586858	0.094457	0.104309	100.914297	9.532034	0.009909	0.104909
27	11.592610	0.086262	0.094405	111.501156	9.618296	0.008969	0.103969
28	12.693908	0.078778	0.085515	123.093766	9.697074	0.008124	0.103124
29	13.899829	0.071943	0.077520	135.787673	9.769018	0.007364	0.102364
30	15.220313	0.065702	0.070322	149.687502	9.834719	0.006681	0.101681



$$i = 0.1 = 10\%; q = 1.10$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.100000	0.909091	10.000000	1.000000	0.909091	1.000000	1.100000
2	1.210000	0.826446	4.761905	2.100000	1.735537	0.476190	0.576190
3	1.331000	0.751315	3.021148	3.310000	2.486852	0.302115	0.402115
4	1.464100	0.683013	2.154708	4.641000	3.169865	0.215471	0.315471
5	1.610510	0.620921	1.637975	6.105100	3.790787	0.163797	0.263797
6	1.771561	0.564474	1.296074	7.715610	4.355261	0.129607	0.229607
7	1.948717	0.513158	1.054055	9.487171	4.868419	0.105405	0.205405
8	2.143589	0.466507	0.874440	11.435888	5.334926	0.087444	0.187444
9	2.357948	0.424098	0.736405	13.579477	5.759024	0.073641	0.173641
10	2.593742	0.385543	0.627454	15.937425	6.144567	0.062745	0.162745
11	2.853117	0.350494	0.539631	18.531167	6.495061	0.053963	0.153963
12	3.138428	0.318631	0.467633	21.384284	6.813692	0.046763	0.146763
13	3.452271	0.289664	0.407785	24.522712	7.103356	0.040779	0.140779
14	3.797498	0.263331	0.357462	27.974983	7.366687	0.035746	0.135746
15	4.177248	0.239392	0.314738	31.772482	7.606080	0.031474	0.131474
16	4.594973	0.217629	0.278166	35.949730	7.823709	0.027817	0.127817
17	5.054470	0.197845	0.246641	40.544703	8.021553	0.024664	0.124664
18	5.559917	0.179859	0.219302	45.599173	8.201412	0.021930	0.121930
19	6.115909	0.163508	0.195469	51.159090	8.364920	0.019547	0.119547
20	6.727500	0.148644	0.174596	57.274999	8.513564	0.017460	0.117460
21	7.400250	0.135131	0.156244	64.002499	8.648694	0.015624	0.115624
22	8.140275	0.122846	0.140051	71.402749	8.771540	0.014005	0.114005
23	8.954302	0.111678	0.125718	79.543024	8.883218	0.012572	0.112572
24	9.849733	0.101526	0.112998	88.497327	8.984744	0.011300	0.111300
25	10.834706	0.092296	0.101681	98.347059	9.077040	0.010168	0.110168
26	11.918177	0.083905	0.091590	109.181765	9.160945	0.009159	0.109159
27	13.109994	0.076278	0.082576	121.099942	9.237223	0.008258	0.108258
28	14.420994	0.069343	0.074510	134.209936	9.306567	0.007451	0.107451
29	15.863093	0.063039	0.067281	148.630930	9.369606	0.006728	0.106728
30	17.449402	0.057309	0.060792	164.494023	9.426914	0.006079	0.106079



$$i = 0.11 = 11\%; q = 1.11$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.110000	0.900901	9.090909	1.000000	0.900901	1.000000	1.110000
2	1.232100	0.811622	4.308488	2.110000	1.712523	0.473934	0.583934
3	1.367631	0.731191	2.720119	3.342100	2.443715	0.299213	0.409213
4	1.518070	0.658731	1.930240	4.709731	3.102446	0.212326	0.322326
5	1.685058	0.593451	1.459730	6.227801	3.695897	0.160570	0.270570
6	1.870415	0.534641	1.148878	7.912860	4.230538	0.126377	0.236377
7	2.076160	0.481658	0.929230	9.783274	4.712196	0.102215	0.212215
8	2.304538	0.433926	0.766555	11.859434	5.146123	0.084321	0.194321
9	2.558037	0.390925	0.641833	14.163972	5.537048	0.070602	0.180602
10	2.839421	0.352184	0.543649	16.722009	5.889232	0.059801	0.169801
11	3.151757	0.317283	0.464736	19.561430	6.206515	0.051121	0.161121
12	3.498451	0.285841	0.400248	22.713187	6.492356	0.044027	0.154027
13	3.883280	0.257514	0.346827	26.211638	6.749870	0.038151	0.148151
14	4.310441	0.231995	0.302075	30.094918	6.981865	0.033228	0.143228
15	4.784589	0.209004	0.264229	34.405359	7.190870	0.029065	0.139065
16	5.310894	0.188292	0.231970	39.189948	7.379162	0.025517	0.135517
17	5.895093	0.169633	0.204286	44.500843	7.548794	0.022471	0.132471
18	6.543553	0.152822	0.180390	50.395936	7.701617	0.019843	0.129843
19	7.263344	0.137678	0.159659	56.939488	7.839294	0.017563	0.127563
20	8.062312	0.124034	0.141597	64.202832	7.963328	0.015576	0.125576
21	8.949166	0.111742	0.125799	72.265144	8.075070	0.013838	0.123838
22	9.933574	0.100669	0.111937	81.214309	8.175739	0.012313	0.122313
23	11.026267	0.090693	0.099738	91.147884	8.266432	0.010971	0.120971
24	12.239157	0.081705	0.088975	102.174151	8.348137	0.009787	0.119787
25	13.585464	0.073608	0.079457	114.413307	8.421745	0.008740	0.118740
26	15.079865	0.066314	0.071023	127.998771	8.488058	0.007813	0.117813
27	16.738650	0.059742	0.063538	143.078636	8.547800	0.006989	0.116989
28	18.579901	0.053822	0.056883	159.817286	8.601622	0.006257	0.116257
29	20.623691	0.048488	0.050959	178.397187	8.650110	0.005605	0.115605
30	22.892297	0.043683	0.045678	199.020878	8.693793	0.005025	0.115025



$$i = 0.12 = 12\%; q = 1.12$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.120000	0.892857	8.333333	1.000000	0.892857	1.000000	1.120000
2	1.254400	0.797194	3.930818	2.120000	1.690051	0.471698	0.591698
3	1.404928	0.711780	2.469575	3.374400	2.401831	0.296349	0.416349
4	1.573519	0.635518	1.743620	4.779328	3.037349	0.209234	0.329234
5	1.762342	0.567427	1.311748	6.352847	3.604776	0.157410	0.277410
6	1.973823	0.506631	1.026881	8.115189	4.111407	0.123226	0.243226
7	2.210681	0.452349	0.825981	10.089012	4.563757	0.099118	0.219118
8	2.475963	0.403883	0.677524	12.299693	4.967640	0.081303	0.201303
9	2.773079	0.360610	0.563991	14.775656	5.328250	0.067679	0.187679
10	3.105848	0.321973	0.474868	17.548735	5.650223	0.056984	0.176984
11	3.478550	0.287476	0.403462	20.654583	5.937699	0.048415	0.168415
12	3.895976	0.256675	0.345307	24.133133	6.194374	0.041437	0.161437
13	4.363493	0.229174	0.297310	28.029109	6.423548	0.035677	0.155677
14	4.887112	0.204620	0.257260	32.392602	6.628168	0.030871	0.150871
15	5.473566	0.182696	0.223535	37.279715	6.810864	0.026824	0.146824
16	6.130394	0.163122	0.194917	42.753280	6.973986	0.023390	0.143390
17	6.866041	0.145644	0.170473	48.883674	7.119630	0.020457	0.140457
18	7.689966	0.130040	0.149478	55.749715	7.249670	0.017937	0.137937
19	8.612762	0.116107	0.131358	63.439681	7.365777	0.015763	0.135763
20	9.646293	0.103667	0.115657	72.052442	7.469444	0.013879	0.133879
21	10.803848	0.092560	0.102001	81.698736	7.562003	0.012240	0.132240
22	12.100310	0.082643	0.090088	92.502584	7.644646	0.010811	0.130811
23	13.552347	0.073788	0.079666	104.602894	7.718434	0.009560	0.129560
24	15.178629	0.065882	0.070529	118.155241	7.784316	0.008463	0.128463
25	17.000064	0.058823	0.062500	133.333870	7.843139	0.007500	0.127500
26	19.040072	0.052521	0.055432	150.333934	7.895660	0.006652	0.126652
27	21.324881	0.046894	0.049201	169.374007	7.942554	0.005904	0.125904
28	23.883866	0.041869	0.043699	190.698887	7.984423	0.005244	0.125244
29	26.749930	0.037383	0.038835	214.582754	8.021806	0.004660	0.124660
30	29.959922	0.033378	0.034530	241.332684	8.055184	0.004144	0.124144



$$i = 0.13 = 13\%; q = 1.13$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.130000	0.884956	7.692308	1.000000	0.884956	1.000000	1.130000
2	1.276900	0.783147	3.611412	2.130000	1.668102	0.469484	0.599484
3	1.442897	0.693050	2.257861	3.406900	2.361153	0.293522	0.423522
4	1.630474	0.613319	1.586109	4.849797	2.974471	0.206194	0.336194
5	1.842435	0.542760	1.187035	6.480271	3.517231	0.154315	0.284315
6	2.081952	0.480319	0.924256	8.322706	3.997550	0.120153	0.250153
7	2.352605	0.425061	0.739314	10.404658	4.422610	0.096111	0.226111
8	2.658444	0.376160	0.602975	12.757263	4.798770	0.078387	0.208387
9	3.004042	0.332885	0.498992	15.415707	5.131655	0.064869	0.194869
10	3.394567	0.294588	0.417612	18.419749	5.426243	0.054290	0.184290
11	3.835861	0.260698	0.352627	21.814317	5.686941	0.045841	0.175841
12	4.334523	0.230706	0.299893	25.650178	5.917647	0.038986	0.168986
13	4.898011	0.204165	0.256541	29.984701	6.121812	0.033350	0.163350
14	5.534753	0.180677	0.220519	34.882712	6.302488	0.028667	0.158667
15	6.254270	0.159891	0.190321	40.417464	6.462379	0.024742	0.154742
16	7.067326	0.141496	0.164817	46.671735	6.603875	0.021426	0.151426
17	7.986078	0.125218	0.143142	53.739060	6.729093	0.018608	0.148608
18	9.024268	0.110812	0.124622	61.725138	6.839905	0.016201	0.146201
19	10.197423	0.098064	0.108726	70.749406	6.937969	0.014134	0.144134
20	11.523088	0.086782	0.095029	80.946829	7.024752	0.012354	0.142354
21	13.021089	0.076798	0.083187	92.469917	7.101550	0.010814	0.140814
22	14.713831	0.067963	0.072919	105.491006	7.169513	0.009479	0.139479
23	16.626629	0.060144	0.063993	120.204837	7.229658	0.008319	0.138319
24	18.788091	0.053225	0.056217	136.831465	7.282883	0.007308	0.137308
25	21.230542	0.047102	0.049430	155.619556	7.329985	0.006426	0.136426
26	23.990513	0.041683	0.043496	176.850098	7.371668	0.005655	0.135655
27	27.109279	0.036888	0.038301	200.840611	7.408556	0.004979	0.134979
28	30.633486	0.032644	0.033746	227.949890	7.441200	0.004387	0.134387
29	34.615839	0.028889	0.029748	258.583376	7.470088	0.003867	0.133867
30	39.115898	0.025565	0.026236	293.199215	7.495653	0.003411	0.133411



$$i = 0.14 = 14\%; q = 1.14$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.140000	0.877193	7.142857	1.000000	0.877193	1.000000	1.140000
2	1.299600	0.769468	3.337784	2.140000	1.646661	0.467290	0.607290
3	1.481544	0.674972	2.076653	3.439600	2.321632	0.290731	0.430731
4	1.688960	0.592080	1.451463	4.921144	2.913712	0.203205	0.343205
5	1.925415	0.519369	1.080597	6.610104	3.433081	0.151284	0.291284
6	2.194973	0.455587	0.836839	8.535519	3.888668	0.117157	0.257157
7	2.502269	0.399637	0.665660	10.730491	4.288305	0.093192	0.233192
8	2.852586	0.350559	0.539786	13.232760	4.638864	0.075570	0.215570
9	3.251949	0.307508	0.444060	16.085347	4.946372	0.062168	0.202168
10	3.707221	0.269744	0.369382	19.337295	5.216116	0.051714	0.191714
11	4.226232	0.236617	0.309959	23.044516	5.452733	0.043394	0.183394
12	4.817905	0.207559	0.261924	27.270749	5.660292	0.036669	0.176669
13	5.492411	0.182069	0.222598	32.088654	5.842362	0.031164	0.171164
14	6.261349	0.159710	0.190065	37.581065	6.002072	0.026609	0.166609
15	7.137938	0.140096	0.162921	43.842414	6.142168	0.022809	0.162809
16	8.137249	0.122892	0.140110	50.980352	6.265060	0.019615	0.159615
17	9.276464	0.107800	0.120825	59.117601	6.372859	0.016915	0.156915
18	10.575169	0.094561	0.104437	68.394066	6.467420	0.014621	0.154621
19	12.055693	0.082948	0.090451	78.969235	6.550369	0.012663	0.152663
20	13.743490	0.072762	0.078471	91.024928	6.623131	0.010986	0.150986
21	15.667578	0.063826	0.068178	104.768418	6.686957	0.009545	0.149545
22	17.861039	0.055988	0.059308	120.435996	6.742944	0.008303	0.148303
23	20.361585	0.049112	0.051649	138.297035	6.792056	0.007231	0.147231
24	23.212207	0.043081	0.045020	158.658620	6.835137	0.006303	0.146303
25	26.461916	0.037790	0.039274	181.870827	6.872927	0.005498	0.145498
26	30.166584	0.033149	0.034286	208.332743	6.906077	0.004800	0.144800
27	34.389906	0.029078	0.029949	238.499327	6.935155	0.004193	0.144193
28	39.204493	0.025507	0.026175	272.889233	6.960662	0.003664	0.143664
29	44.693122	0.022375	0.022887	312.093725	6.983037	0.003204	0.143204
30	50.950159	0.019627	0.020020	356.786847	7.002664	0.002803	0.142803



$$i = 0.15 = 15\%; q = 1.15$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.150000	0.869565	6.666667	1.000000	0.869565	1.000000	1.150000
2	1.322500	0.756144	3.100775	2.150000	1.625709	0.465116	0.615116
3	1.520875	0.657516	1.919846	3.472500	2.283225	0.287977	0.437977
4	1.749006	0.571753	1.335102	4.993375	2.854978	0.200265	0.350265
5	2.011357	0.497177	0.988770	6.742381	3.352155	0.148316	0.298316
6	2.313061	0.432328	0.761579	8.753738	3.784483	0.114237	0.264237
7	2.660020	0.375937	0.602402	11.066799	4.160420	0.090360	0.240360
8	3.059023	0.326902	0.485667	13.726819	4.487322	0.072850	0.222850
9	3.517876	0.284262	0.397160	16.785842	4.771584	0.059574	0.209574
10	4.045558	0.247185	0.328347	20.303718	5.018769	0.049252	0.199252
11	4.652391	0.214943	0.273793	24.349276	5.233712	0.041069	0.191069
12	5.350250	0.186907	0.229872	29.001667	5.420619	0.034481	0.184481
13	6.152788	0.162528	0.194070	34.351917	5.583147	0.029110	0.179110
14	7.075706	0.141329	0.164590	40.504705	5.724476	0.024688	0.174688
15	8.137062	0.122894	0.140114	47.580411	5.847370	0.021017	0.171017
16	9.357621	0.106865	0.119651	55.717472	5.954235	0.017948	0.167948
17	10.761264	0.092926	0.102446	65.075093	6.047161	0.015367	0.165367
18	12.375454	0.080805	0.087909	75.836357	6.127966	0.013186	0.163186
19	14.231772	0.070265	0.075576	88.211811	6.198231	0.011336	0.161336
20	16.366537	0.061100	0.065076	102.443583	6.259331	0.009761	0.159761
21	18.821518	0.053131	0.056112	118.810120	6.312462	0.008417	0.158417
22	21.644746	0.046201	0.048438	137.631638	6.358663	0.007266	0.157266
23	24.891458	0.040174	0.041856	159.276384	6.398837	0.006278	0.156278
24	28.625176	0.034934	0.036199	184.167841	6.433771	0.005430	0.155430
25	32.918953	0.030378	0.031329	212.793017	6.464149	0.004699	0.154699
26	37.856796	0.026415	0.027132	245.711970	6.490564	0.004070	0.154070
27	43.535315	0.022970	0.023510	283.568766	6.513534	0.003526	0.153526
28	50.065612	0.019974	0.020381	327.104080	6.533508	0.003057	0.153057
29	57.575454	0.017369	0.017676	377.169693	6.550877	0.002651	0.152651
30	66.211772	0.015103	0.015335	434.745146	6.565980	0.002300	0.152300



$$i = 0.16 = 16\%; q = 1.16$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.160000	0.862069	6.250000	1.000000	0.862069	1.000000	1.160000
2	1.345600	0.743163	2.893519	2.160000	1.605232	0.462963	0.622963
3	1.560896	0.640658	1.782862	3.505600	2.245890	0.285258	0.445258
4	1.810639	0.552291	1.233594	5.066496	2.798181	0.197375	0.357375
5	2.100342	0.476113	0.908809	6.877135	3.274294	0.145409	0.305409
6	2.436396	0.410442	0.696187	8.977477	3.684736	0.111390	0.271390
7	2.826220	0.353830	0.547579	11.413873	4.038565	0.087613	0.247613
8	3.278415	0.305025	0.438902	14.240093	4.343591	0.070224	0.230224
9	3.802961	0.262953	0.356766	17.518508	4.606544	0.057082	0.217082
10	4.411435	0.226684	0.293132	21.321469	4.833227	0.046901	0.206901
11	5.117265	0.195417	0.242880	25.732904	5.028644	0.038861	0.198861
12	5.936027	0.168463	0.202592	30.850169	5.197107	0.032415	0.192415
13	6.885791	0.145227	0.169901	36.786196	5.342334	0.027184	0.187184
14	7.987518	0.125195	0.143112	43.671987	5.467529	0.022898	0.182898
15	9.265521	0.107927	0.120985	51.659505	5.575456	0.019358	0.179358
16	10.748004	0.093041	0.102585	60.925026	5.668497	0.016414	0.176414
17	12.467685	0.080207	0.087202	71.673030	5.748704	0.013952	0.173952
18	14.462514	0.069144	0.074280	84.140715	5.817848	0.011885	0.171885
19	16.776517	0.059607	0.063385	98.603230	5.877455	0.010142	0.170142
20	19.460759	0.051385	0.054169	115.379747	5.928841	0.008667	0.168667
21	22.574481	0.044298	0.046351	134.840506	5.973139	0.007416	0.167416
22	26.186398	0.038188	0.039704	157.414987	6.011326	0.006353	0.166353
23	30.376222	0.032920	0.034041	183.601385	6.044247	0.005447	0.165447
24	35.236417	0.028380	0.029209	213.977607	6.072627	0.004673	0.164673
25	40.874244	0.024465	0.025079	249.214024	6.097092	0.004013	0.164013
26	47.414123	0.021091	0.021545	290.088267	6.118183	0.003447	0.163447
27	55.000382	0.018182	0.018518	337.502390	6.136364	0.002963	0.162963
28	63.800444	0.015674	0.015923	392.502773	6.152038	0.002548	0.162548
29	74.008515	0.013512	0.013697	456.303216	6.165550	0.002192	0.162192
30	85.849877	0.011648	0.011786	530.311731	6.177198	0.001886	0.161886



$$i = 0.17 = 17\%; q = 1.17$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.170000	0.854701	5.882353	1.000000	0.854701	1.000000	1.170000
2	1.368900	0.730514	2.710762	2.170000	1.585214	0.460829	0.630829
3	1.601613	0.624371	1.662198	3.538900	2.209585	0.282574	0.452574
4	1.873887	0.533650	1.144312	5.140513	2.743235	0.194533	0.364533
5	2.192448	0.456111	0.838611	7.014400	3.199346	0.142564	0.312564
6	2.565164	0.389839	0.638911	9.206848	3.589185	0.108615	0.278615
7	3.001242	0.333195	0.499690	11.772012	3.922380	0.084947	0.254947
8	3.511453	0.284782	0.398176	14.773255	4.207163	0.067690	0.237690
9	4.108400	0.243404	0.321709	18.284708	4.450566	0.054691	0.224691
10	4.806828	0.208037	0.262686	22.393108	4.658604	0.044657	0.214657
11	5.623989	0.177810	0.216263	27.199937	4.836413	0.036765	0.206765
12	6.580067	0.151974	0.179209	32.823926	4.988387	0.030466	0.200466
13	7.698679	0.129892	0.149283	39.403993	5.118280	0.025378	0.195378
14	9.007454	0.111019	0.124884	47.102672	5.229299	0.021230	0.191230
15	10.538721	0.094888	0.104836	56.110126	5.324187	0.017822	0.187822
16	12.330304	0.081101	0.088259	66.648848	5.405288	0.015004	0.185004
17	14.426456	0.069317	0.074480	78.979152	5.474605	0.012662	0.182662
18	16.878953	0.059245	0.062976	93.405608	5.533851	0.010706	0.180706
19	19.748375	0.050637	0.053338	110.284561	5.584488	0.009067	0.179067
20	23.105599	0.043280	0.045237	130.032936	5.627767	0.007690	0.177690
21	27.033551	0.036991	0.038412	153.138535	5.664758	0.006530	0.176530
22	31.629255	0.031616	0.032649	180.172086	5.696375	0.005550	0.175550
23	37.006228	0.027022	0.027773	211.801341	5.723397	0.004721	0.174721
24	43.297287	0.023096	0.023642	248.807569	5.746493	0.004019	0.174019
25	50.657826	0.019740	0.020138	292.104856	5.766234	0.003423	0.173423
26	59.269656	0.016872	0.017162	342.762681	5.783106	0.002917	0.172917
27	69.345497	0.014421	0.014632	402.032337	5.797526	0.002487	0.172487
28	81.134232	0.012325	0.012479	471.377835	5.809851	0.002121	0.172121
29	94.927051	0.010534	0.010647	552.512066	5.820386	0.001810	0.171810
30	111.064650	0.009004	0.009086	647.439118	5.829390	0.001545	0.171545



$$i = 0.18 = 18\%; q = 1.18$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.180000	0.847458	5.555556	1.000000	0.847458	1.000000	1.180000
2	1.392400	0.718184	2.548420	2.180000	1.565642	0.458716	0.638716
3	1.643032	0.608631	1.555133	3.572400	2.174273	0.279924	0.459924
4	1.938778	0.515789	1.065215	5.215432	2.690062	0.191739	0.371739
5	2.287758	0.437109	0.776544	7.154210	3.127171	0.139778	0.319778
6	2.699554	0.370432	0.588390	9.441968	3.497603	0.105910	0.285910
7	3.185474	0.313925	0.457567	12.141522	3.811528	0.082362	0.262362
8	3.758859	0.266038	0.362469	15.326996	4.077566	0.065244	0.245244
9	4.435454	0.225456	0.291082	19.085855	4.303022	0.052395	0.232395
10	5.233836	0.191064	0.236192	23.521309	4.494086	0.042515	0.222515
11	6.175926	0.161919	0.193202	28.755144	4.656005	0.034776	0.214776
12	7.287593	0.137220	0.159043	34.931070	4.793225	0.028628	0.208628
13	8.599359	0.116288	0.131590	42.218663	4.909513	0.023686	0.203686
14	10.147244	0.098549	0.109323	50.818022	5.008062	0.019678	0.199678
15	11.973748	0.083516	0.091127	60.965266	5.091578	0.016403	0.196403
16	14.129023	0.070776	0.076167	72.939014	5.162354	0.013710	0.193710
17	16.672247	0.059980	0.063807	87.068036	5.222334	0.011485	0.191485
18	19.673251	0.050830	0.053553	103.740283	5.273164	0.009639	0.189639
19	23.214436	0.043077	0.045016	123.413534	5.316241	0.008103	0.188103
20	27.393035	0.036506	0.037889	146.627970	5.352746	0.006820	0.186820
21	32.323781	0.030937	0.031925	174.021005	5.383683	0.005746	0.185746
22	38.142061	0.026218	0.026924	206.344785	5.409901	0.004846	0.184846
23	45.007632	0.022218	0.022723	244.486847	5.432120	0.004090	0.184090
24	53.109006	0.018829	0.019191	289.494479	5.450949	0.003454	0.183454
25	62.668627	0.015957	0.016216	342.603486	5.466906	0.002919	0.182919
26	73.948980	0.013523	0.013708	405.272113	5.480429	0.002467	0.182467
27	87.259797	0.011460	0.011593	479.221093	5.491889	0.002087	0.182087
28	102.966560	0.009712	0.009807	566.480890	5.501601	0.001765	0.181765
29	121.500541	0.008230	0.008299	669.447450	5.509831	0.001494	0.181494
30	143.370638	0.006975	0.007024	790.947991	5.516806	0.001264	0.181264



$$i = 0.19 = 19\%; q = 1.19$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.190000	0.840336	5.263158	1.000000	0.840336	1.000000	1.190000
2	1.416100	0.706165	2.403268	2.190000	1.546501	0.456621	0.646621
3	1.685159	0.593416	1.459515	3.606100	2.139917	0.277308	0.467308
4	2.005339	0.498669	0.994689	5.291259	2.638586	0.188991	0.378991
5	2.386354	0.419049	0.721317	7.296598	3.057635	0.137050	0.327050
6	2.839761	0.352142	0.543549	9.682952	3.409777	0.103274	0.293274
7	3.379315	0.295918	0.420289	12.522713	3.705695	0.079855	0.269855
8	4.021385	0.248671	0.330974	15.902028	3.954366	0.062885	0.252885
9	4.785449	0.208967	0.264169	19.923413	4.163332	0.050192	0.240192
10	5.694684	0.175602	0.213007	24.708862	4.338935	0.040471	0.230471
11	6.776674	0.147565	0.173110	30.403546	4.486500	0.032891	0.222891
12	8.064242	0.124004	0.141558	37.180220	4.610504	0.026896	0.216896
13	9.596448	0.104205	0.116327	45.244461	4.714709	0.022102	0.212102
14	11.419773	0.087567	0.095971	54.840909	4.802277	0.018235	0.208235
15	13.589530	0.073586	0.079431	66.260682	4.875863	0.015092	0.205092
16	16.171540	0.061837	0.065913	79.850211	4.937700	0.012523	0.202523
17	19.244133	0.051964	0.054812	96.021751	4.989664	0.010414	0.200414
18	22.900518	0.043667	0.045661	115.265884	5.033331	0.008676	0.198676
19	27.251616	0.036695	0.038093	138.166402	5.070026	0.007238	0.197238
20	32.429423	0.030836	0.031817	165.418018	5.100862	0.006045	0.196045
21	38.591014	0.025913	0.026602	197.847442	5.126775	0.005054	0.195054
22	45.923307	0.021775	0.022260	236.438456	5.148550	0.004229	0.194229
23	54.648735	0.018299	0.018640	282.361762	5.166849	0.003542	0.193542
24	65.031994	0.015377	0.015617	337.010497	5.182226	0.002967	0.192967
25	77.388073	0.012922	0.013091	402.042491	5.195148	0.002487	0.192487
26	92.091807	0.010859	0.010978	479.430565	5.206007	0.002086	0.192086
27	109.589251	0.009125	0.009209	571.522372	5.215132	0.001750	0.191750
28	130.411208	0.007668	0.007727	681.111623	5.222800	0.001468	0.191468
29	155.189338	0.006444	0.006486	811.522831	5.229243	0.001232	0.191232
30	184.675312	0.005415	0.005444	966.712169	5.234658	0.001034	0.191034



$$i = 0.20 = 20\%; q = 1.20$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.200000	0.833333	5.000000	1.000000	0.833333	1.000000	1.200000
2	1.440000	0.694444	2.272727	2.200000	1.527778	0.454545	0.654545
3	1.728000	0.578704	1.373626	3.640000	2.106481	0.274725	0.474725
4	2.073600	0.482253	0.931446	5.368000	2.588735	0.186289	0.386289
5	2.488320	0.401878	0.671899	7.441600	2.990612	0.134380	0.334380
6	2.985984	0.334898	0.503529	9.929920	3.325510	0.100706	0.300706
7	3.583181	0.279082	0.387120	12.915904	3.604592	0.077424	0.277424
8	4.299817	0.232568	0.303047	16.499085	3.837160	0.060609	0.260609
9	5.159780	0.193807	0.240397	20.798902	4.030967	0.048079	0.248079
10	6.191736	0.161506	0.192614	25.958682	4.192472	0.038523	0.238523
11	7.430084	0.134588	0.155519	32.150419	4.327060	0.031104	0.231104
12	8.916100	0.112157	0.126325	39.580502	4.439217	0.025265	0.225265
13	10.699321	0.093464	0.103100	48.496603	4.532681	0.020620	0.220620
14	12.839185	0.077887	0.084465	59.195923	4.610567	0.016893	0.216893
15	15.407022	0.064905	0.069411	72.035108	4.675473	0.013882	0.213882
16	18.488426	0.054088	0.057181	87.442129	4.729561	0.011436	0.211436
17	22.186111	0.045073	0.047201	105.930555	4.774634	0.009440	0.209440
18	26.623333	0.037561	0.039027	128.116666	4.812195	0.007805	0.207805
19	31.948000	0.031301	0.032312	154.740000	4.843496	0.006462	0.206462
20	38.337600	0.026084	0.026783	186.688000	4.869580	0.005357	0.205357
21	46.005120	0.021737	0.022220	225.025600	4.891316	0.004444	0.204444
22	55.206144	0.018114	0.018448	271.030719	4.909430	0.003690	0.203690
23	66.247373	0.015095	0.015326	326.236863	4.924525	0.003065	0.203065
24	79.496847	0.012579	0.012739	392.484236	4.937104	0.002548	0.202548
25	95.396217	0.010483	0.010594	471.981083	4.947587	0.002119	0.202119
26	114.475460	0.008735	0.008812	567.377300	4.956323	0.001762	0.201762
27	137.370552	0.007280	0.007333	681.852760	4.963602	0.001467	0.201467
28	164.844662	0.006066	0.006103	819.223312	4.969668	0.001221	0.201221
29	197.813595	0.005055	0.005081	984.067974	4.974724	0.001016	0.201016
30	237.376314	0.004213	0.004231	1181.881569	4.978936	0.000846	0.200846



$$i = 0.21 = 21\%; q = 1.21$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.210000	0.826446	4.761905	1.000000	0.826446	1.000000	1.210000
2	1.464100	0.683013	2.154708	2.210000	1.509460	0.452489	0.662489
3	1.771561	0.564474	1.296074	3.674100	2.073934	0.272175	0.482175
4	2.143589	0.466507	0.874440	5.445661	2.540441	0.183632	0.393632
5	2.593742	0.385543	0.627454	7.589250	2.925984	0.131765	0.341765
6	3.138428	0.318631	0.467633	10.182992	3.244615	0.098203	0.308203
7	3.797498	0.263331	0.357462	13.321421	3.507946	0.075067	0.285067
8	4.594973	0.217629	0.278166	17.118919	3.725576	0.058415	0.268415
9	5.559917	0.179859	0.219302	21.713892	3.905434	0.046053	0.256053
10	6.727500	0.148644	0.174596	27.273809	4.054078	0.036665	0.246665
11	8.140275	0.122846	0.140051	34.001309	4.176924	0.029411	0.239411
12	9.849733	0.101526	0.112998	42.141584	4.278450	0.023730	0.233730
13	11.918177	0.083905	0.091590	51.991317	4.362355	0.019234	0.229234
14	14.420994	0.069343	0.074510	63.909493	4.431698	0.015647	0.225647
15	17.449402	0.057309	0.060792	78.330487	4.489007	0.012766	0.222766
16	21.113777	0.047362	0.049717	95.779889	4.536369	0.010441	0.220441
17	25.547670	0.039143	0.040737	116.893666	4.575512	0.008555	0.218555
18	30.912681	0.032349	0.033431	142.441336	4.607861	0.007020	0.217020
19	37.404343	0.026735	0.027469	173.354016	4.634596	0.005769	0.215769
20	45.259256	0.022095	0.022594	210.758360	4.656691	0.004745	0.214745
21	54.763699	0.018260	0.018600	256.017615	4.674951	0.003906	0.213906
22	66.264076	0.015091	0.015322	310.781315	4.690042	0.003218	0.213218
23	80.179532	0.012472	0.012630	377.045391	4.702514	0.002652	0.212652
24	97.017234	0.010307	0.010415	457.224923	4.712822	0.002187	0.212187
25	117.390853	0.008519	0.008592	554.242157	4.721340	0.001804	0.211804
26	142.042932	0.007040	0.007090	671.633009	4.728380	0.001489	0.211489
27	171.871948	0.005818	0.005852	813.675941	4.734199	0.001229	0.211229
28	207.965057	0.004809	0.004832	985.547889	4.739007	0.001015	0.211015
29	251.637719	0.003974	0.003990	1193.512946	4.742981	0.000838	0.210838
30	304.481640	0.003284	0.003295	1445.150664	4.746265	0.000692	0.210692



$$i = 0.22 = 22\%; q = 1.22$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.220000	0.819672	4.545455	1.000000	0.819672	1.000000	1.220000
2	1.488400	0.671862	2.047502	2.220000	1.491535	0.450450	0.670450
3	1.815848	0.550707	1.225719	3.708400	2.042241	0.269658	0.489658
4	2.215335	0.451399	0.822819	5.524248	2.493641	0.181020	0.401020
5	2.702708	0.369999	0.587300	7.739583	2.863640	0.129206	0.349206
6	3.297304	0.303278	0.435293	10.442291	3.166918	0.095764	0.315764
7	4.022711	0.248589	0.330829	13.739595	3.415506	0.072782	0.292782
8	4.907707	0.203761	0.255905	17.762306	3.619268	0.056299	0.276299
9	5.987403	0.167017	0.200505	22.670013	3.786285	0.044111	0.264111
10	7.304631	0.136899	0.158614	28.657416	3.923184	0.034895	0.254895
11	8.911650	0.112213	0.126396	35.962047	4.035397	0.027807	0.247807
12	10.872213	0.091978	0.101294	44.873697	4.127375	0.022285	0.242285
13	13.264100	0.075391	0.081539	55.745911	4.202766	0.017939	0.237939
14	16.182202	0.061796	0.065867	69.010011	4.264562	0.014491	0.234491
15	19.742287	0.050653	0.053355	85.192213	4.315215	0.011738	0.231738
16	24.085590	0.041519	0.043317	104.934500	4.356734	0.009530	0.229530
17	29.384420	0.034032	0.035231	129.020090	4.390765	0.007751	0.227751
18	35.848992	0.027895	0.028695	158.404510	4.418660	0.006313	0.226313
19	43.735771	0.022865	0.023400	194.253503	4.441525	0.005148	0.225148
20	53.357640	0.018741	0.019099	237.989273	4.460266	0.004202	0.224202
21	65.096321	0.015362	0.015602	291.346913	4.475628	0.003432	0.223432
22	79.417512	0.012592	0.012752	356.443234	4.488220	0.002805	0.222805
23	96.889364	0.010321	0.010429	435.860746	4.498541	0.002294	0.222294
24	118.205024	0.008460	0.008532	532.750110	4.507001	0.001877	0.221877
25	144.210130	0.006934	0.006983	650.955134	4.513935	0.001536	0.221536
26	175.936358	0.005684	0.005716	795.165264	4.519619	0.001258	0.221258
27	214.642357	0.004659	0.004681	971.101622	4.524278	0.001030	0.221030
28	261.863675	0.003819	0.003833	1185.743978	4.528096	0.000843	0.220843
29	319.473684	0.003130	0.003140	1447.607654	4.531227	0.000691	0.220691
30	389.757894	0.002566	0.002572	1767.081337	4.533792	0.000566	0.220566



$$i = 0.23 = 23\%; q = 1.23$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.230000	0.813008	4.347826	1.000000	0.813008	1.000000	1.230000
2	1.512900	0.660982	1.949698	2.230000	1.473990	0.448430	0.678430
3	1.860867	0.537384	1.161620	3.742900	2.011374	0.267173	0.497173
4	2.288866	0.436897	0.775876	5.603767	2.448272	0.178451	0.408451
5	2.815306	0.355201	0.550871	7.892633	2.803473	0.126700	0.356700
6	3.462826	0.288781	0.406038	10.707939	3.092254	0.093389	0.323389
7	4.259276	0.234782	0.306817	14.170765	3.327036	0.070568	0.300568
8	5.238909	0.190879	0.235910	18.430041	3.517916	0.054259	0.284259
9	6.443859	0.155187	0.183693	23.668950	3.673102	0.042249	0.272249
10	7.925946	0.126168	0.144385	30.112809	3.799270	0.033208	0.263208
11	9.748914	0.102576	0.114300	38.038755	3.901846	0.026289	0.256289
12	11.991164	0.083395	0.090982	47.787669	3.985240	0.020926	0.250926
13	14.749132	0.067801	0.072732	59.778833	4.053041	0.016728	0.246728
14	18.141432	0.055122	0.058338	74.527964	4.108163	0.013418	0.243418
15	22.313961	0.044815	0.046918	92.669396	4.152978	0.010791	0.240791
16	27.446172	0.036435	0.037813	114.983357	4.189413	0.008697	0.238697
17	33.758792	0.029622	0.030526	142.429529	4.219035	0.007021	0.237021
18	41.523314	0.024083	0.024677	176.188321	4.243118	0.005676	0.235676
19	51.073676	0.019580	0.019971	217.711635	4.262698	0.004593	0.234593
20	62.820622	0.015918	0.016176	268.785311	4.278616	0.003720	0.233720
21	77.269364	0.012942	0.013111	331.605932	4.291558	0.003016	0.233016
22	95.041318	0.010522	0.010634	408.875297	4.302079	0.002446	0.232446
23	116.900822	0.008554	0.008628	503.916615	4.310634	0.001984	0.231984
24	143.788010	0.006955	0.007003	620.817437	4.317588	0.001611	0.231611
25	176.859253	0.005654	0.005686	764.605447	4.323243	0.001308	0.231308
26	217.536881	0.004597	0.004618	941.464700	4.327839	0.001062	0.231062
27	267.570364	0.003737	0.003751	1159.001581	4.331577	0.000863	0.230863
28	329.111547	0.003038	0.003048	1426.571945	4.334615	0.000701	0.230701
29	404.807203	0.002470	0.002476	1755.683492	4.337086	0.000570	0.230570
30	497.912860	0.002008	0.002012	2160.490695	4.339094	0.000463	0.230463



$$i = 0.24 = 24\%; q = 1.24$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.240000	0.806452	4.166667	1.000000	0.806452	1.000000	1.240000
2	1.537600	0.650364	1.860119	2.240000	1.456816	0.446429	0.686429
3	1.906624	0.524487	1.102993	3.777600	1.981303	0.264718	0.504718
4	2.364214	0.422974	0.733023	5.684224	2.404277	0.175926	0.415926
5	2.931625	0.341108	0.517699	8.048438	2.745384	0.124248	0.364248
6	3.635215	0.275087	0.379476	10.980063	3.020471	0.091074	0.331074
7	4.507667	0.221844	0.285090	14.615278	3.242316	0.068422	0.308422
8	5.589507	0.178907	0.217888	19.122945	3.421222	0.052293	0.292293
9	6.930988	0.144280	0.168606	24.712451	3.565502	0.040465	0.280465
10	8.594426	0.116354	0.131676	31.643440	3.681856	0.031602	0.271602
11	10.657088	0.093834	0.103551	40.237865	3.775691	0.024852	0.264852
12	13.214789	0.075673	0.081868	50.894953	3.851363	0.019648	0.259648
13	16.386338	0.061026	0.064993	64.109741	3.912390	0.015598	0.255598
14	20.319059	0.049215	0.051762	80.496079	3.961605	0.012423	0.252423
15	25.195633	0.039689	0.041330	100.815138	4.001294	0.009919	0.249919
16	31.242585	0.032008	0.033066	126.010772	4.033302	0.007936	0.247936
17	38.740806	0.025813	0.026497	157.253357	4.059114	0.006359	0.246359
18	48.038599	0.020817	0.021259	195.994162	4.079931	0.005102	0.245102
19	59.567863	0.016788	0.017074	244.032761	4.096718	0.004098	0.244098
20	73.864150	0.013538	0.013724	303.600624	4.110257	0.003294	0.243294
21	91.591546	0.010918	0.011039	377.464774	4.121175	0.002649	0.242649
22	113.573517	0.008805	0.008883	469.056320	4.129980	0.002132	0.242132
23	140.831161	0.007101	0.007151	582.629836	4.137080	0.001716	0.241716
24	174.630639	0.005726	0.005759	723.460997	4.142807	0.001382	0.241382
25	216.541993	0.004618	0.004639	898.091636	4.147425	0.001113	0.241113
26	268.512071	0.003724	0.003738	1114.633629	4.151149	0.000897	0.240897
27	332.954968	0.003003	0.003012	1383.145700	4.154152	0.000723	0.240723
28	412.864160	0.002422	0.002428	1716.100668	4.156575	0.000583	0.240583
29	511.951559	0.001953	0.001957	2128.964828	4.158528	0.000470	0.240470
30	634.819933	0.001575	0.001578	2640.916387	4.160103	0.000379	0.240379



$$i = 0.25 = 25\%; q = 1.25$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.250000	0.800000	4.000000	1.000000	0.800000	1.000000	1.250000
2	1.562500	0.640000	1.777778	2.250000	1.440000	0.444444	0.694444
3	1.953125	0.512000	1.049180	3.812500	1.952000	0.262295	0.512295
4	2.441406	0.409600	0.693767	5.765625	2.361600	0.173442	0.423442
5	3.051758	0.327680	0.487387	8.207031	2.689280	0.121847	0.371847
6	3.814697	0.262144	0.355278	11.258789	2.951424	0.088819	0.338819
7	4.768372	0.209715	0.265367	15.073486	3.161139	0.066342	0.316342
8	5.960464	0.167772	0.201594	19.841858	3.328911	0.050399	0.300399
9	7.450581	0.134218	0.155025	25.802322	3.463129	0.038756	0.288756
10	9.313226	0.107374	0.120290	33.252903	3.570503	0.030073	0.280073
11	11.641532	0.085899	0.093971	42.566129	3.656403	0.023493	0.273493
12	14.551915	0.068719	0.073790	54.207661	3.725122	0.018448	0.268448
13	18.189894	0.054976	0.058174	68.759576	3.780098	0.014543	0.264543
14	22.737368	0.043980	0.046004	86.949470	3.824078	0.011501	0.261501
15	28.421709	0.035184	0.036467	109.686838	3.859263	0.009117	0.259117
16	35.527137	0.028147	0.028963	138.108547	3.887410	0.007241	0.257241
17	44.408921	0.022518	0.023037	173.635684	3.909928	0.005759	0.255759
18	55.511151	0.018014	0.018345	218.044605	3.927942	0.004586	0.254586
19	69.388939	0.014412	0.014622	273.555756	3.942354	0.003656	0.253656
20	86.736174	0.011529	0.011664	342.944695	3.953883	0.002916	0.252916
21	108.420217	0.009223	0.009309	429.680869	3.963107	0.002327	0.252327
22	135.525272	0.007379	0.007434	538.101086	3.970485	0.001858	0.251858
23	169.406589	0.005903	0.005938	673.626358	3.976388	0.001485	0.251485
24	211.758237	0.004722	0.004745	843.032947	3.981111	0.001186	0.251186
25	264.697796	0.003778	0.003792	1054.791184	3.984888	0.000948	0.250948
26	330.872245	0.003022	0.003031	1319.488980	3.987911	0.000758	0.250758
27	413.590306	0.002418	0.002424	1650.361225	3.990329	0.000606	0.250606
28	516.987883	0.001934	0.001938	2063.951531	3.992263	0.000485	0.250485
29	646.234854	0.001547	0.001550	2580.939414	3.993810	0.000387	0.250387
30	807.793567	0.001238	0.001239	3227.174268	3.995048	0.000310	0.250310



$$i = 0.26 = 26\%; q = 1.26$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.260000	0.793651	3.846154	1.000000	0.793651	1.000000	1.260000
2	1.587600	0.629882	1.701838	2.260000	1.423532	0.442478	0.702478
3	2.000376	0.499906	0.999624	3.847600	1.923438	0.259902	0.519902
4	2.520474	0.396751	0.657690	5.847976	2.320189	0.170999	0.430999
5	3.175797	0.314882	0.459602	8.368450	2.635071	0.119496	0.379496
6	4.001504	0.249906	0.333166	11.544247	2.884977	0.086623	0.346623
7	5.041895	0.198338	0.247409	15.545751	3.083315	0.064326	0.324326
8	6.352788	0.157411	0.186819	20.587646	3.240726	0.048573	0.308573
9	8.004513	0.124930	0.142765	26.940434	3.365656	0.037119	0.297119
10	10.085686	0.099150	0.110063	34.944947	3.464806	0.028616	0.288616
11	12.707965	0.078691	0.085412	45.030633	3.543497	0.022207	0.282207
12	16.012035	0.062453	0.066613	57.738598	3.605950	0.017319	0.277319
13	20.175165	0.049566	0.052151	73.750633	3.655516	0.013559	0.273559
14	25.420707	0.039338	0.040949	93.925798	3.694854	0.010647	0.270647
15	32.030091	0.031221	0.032227	119.346505	3.726074	0.008379	0.268379
16	40.357915	0.024778	0.025408	151.376596	3.750853	0.006606	0.266606
17	50.850973	0.019665	0.020060	191.734511	3.770518	0.005216	0.265216
18	64.072226	0.015607	0.015855	242.585484	3.786125	0.004122	0.264122
19	80.731005	0.012387	0.012542	306.657710	3.798512	0.003261	0.263261
20	101.721066	0.009831	0.009928	387.388715	3.808343	0.002581	0.262581
21	128.168543	0.007802	0.007864	489.109781	3.816145	0.002045	0.262045
22	161.492364	0.006192	0.006231	617.278324	3.822338	0.001620	0.261620
23	203.480379	0.004914	0.004939	778.770688	3.827252	0.001284	0.261284
24	256.385277	0.003900	0.003916	982.251067	3.831152	0.001018	0.261018
25	323.045450	0.003096	0.003105	1238.636345	3.834248	0.000807	0.260807
26	407.037266	0.002457	0.002463	1561.681794	3.836705	0.000640	0.260640
27	512.866956	0.001950	0.001954	1968.719061	3.838655	0.000508	0.260508
28	646.212364	0.001547	0.001550	2481.586016	3.840202	0.000403	0.260403
29	814.227579	0.001228	0.001230	3127.798381	3.841430	0.000320	0.260320
30	1025.926749	0.000975	0.000976	3942.025959	3.842405	0.000254	0.260254



$$i = 0.27 = 27\%; q = 1.27$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.270000	0.787402	3.703704	1.000000	0.787402	1.000000	1.270000
2	1.612900	0.620001	1.631588	2.270000	1.407403	0.440529	0.710529
3	2.048383	0.488190	0.953850	3.882900	1.895593	0.257539	0.527539
4	2.601446	0.384402	0.624436	5.931283	2.279994	0.168598	0.438598
5	3.303837	0.302678	0.434058	8.532729	2.582673	0.117196	0.387196
6	4.195873	0.238329	0.312904	11.836566	2.821002	0.084484	0.354484
7	5.328759	0.187661	0.231013	16.032439	3.008663	0.062374	0.332374
8	6.767523	0.147765	0.173385	21.361198	3.156428	0.046814	0.316814
9	8.594755	0.116350	0.131670	28.128721	3.272778	0.035551	0.305551
10	10.915339	0.091614	0.100854	36.723476	3.364392	0.027231	0.297231
11	13.862480	0.072137	0.077746	47.638815	3.436529	0.020991	0.290991
12	17.605350	0.056801	0.060222	61.501295	3.493330	0.016260	0.286260
13	22.358794	0.044725	0.046819	79.106644	3.538055	0.012641	0.282641
14	28.395668	0.035217	0.036502	101.465438	3.573272	0.009856	0.279856
15	36.062499	0.027730	0.028521	129.861106	3.601001	0.007701	0.277701
16	45.799373	0.021834	0.022322	165.923605	3.622836	0.006027	0.276027
17	58.165204	0.017192	0.017493	211.722978	3.640028	0.004723	0.274723
18	73.869809	0.013537	0.013723	269.888182	3.653565	0.003705	0.273705
19	93.814658	0.010659	0.010774	343.757991	3.664225	0.002909	0.272909
20	119.144615	0.008393	0.008464	437.572649	3.672618	0.002285	0.272285
21	151.313661	0.006609	0.006653	556.717264	3.679227	0.001796	0.271796
22	192.168350	0.005204	0.005231	708.030926	3.684430	0.001412	0.271412
23	244.053804	0.004097	0.004114	900.199276	3.688528	0.001111	0.271111
24	309.948332	0.003226	0.003237	1144.253080	3.691754	0.000874	0.270874
25	393.634381	0.002540	0.002547	1454.201412	3.694295	0.000688	0.270688
26	499.915664	0.002000	0.002004	1847.835793	3.696295	0.000541	0.270541
27	634.892893	0.001575	0.001578	2347.751457	3.697870	0.000426	0.270426
28	806.313974	0.001240	0.001242	2982.644350	3.699110	0.000335	0.270335
29	1024.018748	0.000977	0.000977	3788.958324	3.700087	0.000264	0.270264
30	1300.503809	0.000769	0.000770	4812.977072	3.700856	0.000208	0.270208



$$i = 0.28 = 28\%; q = 1.28$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.280000	0.781250	3.571429	1.000000	0.781250	1.000000	1.280000
2	1.638400	0.610352	1.566416	2.280000	1.391602	0.438596	0.718596
3	2.097152	0.476837	0.911451	3.918400	1.868439	0.255206	0.535206
4	2.684355	0.372529	0.593699	6.015552	2.240968	0.166236	0.446236
5	3.435974	0.291038	0.410513	8.699907	2.532006	0.114944	0.394944
6	4.398047	0.227374	0.294287	12.135880	2.759380	0.082400	0.362400
7	5.629500	0.177636	0.216006	16.533927	2.937015	0.060482	0.340482
8	7.205759	0.138778	0.161141	22.163426	3.075793	0.045119	0.325119
9	9.223372	0.108420	0.121605	29.369186	3.184214	0.034049	0.314049
10	11.805916	0.084703	0.092542	38.592558	3.268917	0.025912	0.305912
11	15.111573	0.066174	0.070864	50.398474	3.335091	0.019842	0.299842
12	19.342813	0.051699	0.054517	65.510047	3.386790	0.015265	0.295265
13	24.758801	0.040390	0.042090	84.852860	3.427180	0.011785	0.291785
14	31.691265	0.031554	0.032583	109.611661	3.458734	0.009123	0.289123
15	40.564819	0.024652	0.025275	141.302926	3.483386	0.007077	0.287077
16	51.922969	0.019259	0.019638	181.867745	3.502645	0.005499	0.285499
17	66.461400	0.015046	0.015276	233.790714	3.517692	0.004277	0.284277
18	85.070592	0.011755	0.011895	300.252113	3.529447	0.003331	0.283331
19	108.890357	0.009184	0.009269	385.322705	3.538630	0.002595	0.282595
20	139.379657	0.007175	0.007226	494.213062	3.545805	0.002023	0.282023
21	178.405962	0.005605	0.005637	633.592720	3.551410	0.001578	0.281578
22	228.359631	0.004379	0.004398	811.998682	3.555789	0.001232	0.281232
23	292.300327	0.003421	0.003433	1040.358312	3.559210	0.000961	0.280961
24	374.144419	0.002673	0.002680	1332.658640	3.561883	0.000750	0.280750
25	478.904857	0.002088	0.002092	1706.803059	3.563971	0.000586	0.280586
26	612.998216	0.001631	0.001634	2185.707916	3.565602	0.000458	0.280458
27	784.637717	0.001274	0.001276	2798.706132	3.566877	0.000357	0.280357
28	1004.336278	0.000996	0.000997	3583.343849	3.567873	0.000279	0.280279
29	1285.550435	0.000778	0.000778	4587.680126	3.568650	0.000218	0.280218
30	1645.504557	0.000608	0.000608	5873.230562	3.569258	0.000170	0.280170



$$i = 0.29 = 29\%; q = 1.29$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.290000	0.775194	3.448276	1.000000	0.775194	1.000000	1.290000
2	1.664100	0.600925	1.505797	2.290000	1.376119	0.436681	0.726681
3	2.146689	0.465834	0.872076	3.954100	1.841953	0.252902	0.542902
4	2.769229	0.361111	0.565218	6.100789	2.203064	0.163913	0.453913
5	3.572305	0.279931	0.388756	8.870018	2.482996	0.112739	0.402739
6	4.608274	0.217001	0.277141	12.442323	2.699997	0.080371	0.370371
7	5.944673	0.168218	0.202238	17.050597	2.868214	0.058649	0.348649
8	7.668628	0.130401	0.149956	22.995270	2.998616	0.043487	0.333487
9	9.892530	0.101086	0.112454	30.663898	3.099702	0.032612	0.322612
10	12.761364	0.078362	0.085024	40.556428	3.178064	0.024657	0.314657
11	16.462160	0.060745	0.064674	53.317792	3.238809	0.018755	0.308755
12	21.236186	0.047089	0.049416	69.779952	3.285899	0.014331	0.304331
13	27.394680	0.036503	0.037886	91.016138	3.322402	0.010987	0.300987
14	35.339137	0.028297	0.029121	118.410819	3.350699	0.008445	0.298445
15	45.587487	0.021936	0.022428	153.749956	3.372635	0.006504	0.296504
16	58.807859	0.017005	0.017299	199.337443	3.389640	0.005017	0.295017
17	75.862137	0.013182	0.013358	258.145302	3.402821	0.003874	0.293874
18	97.862157	0.010218	0.010324	334.007439	3.413040	0.002994	0.292994
19	126.242183	0.007921	0.007985	431.869596	3.420961	0.002316	0.292316
20	162.852416	0.006141	0.006178	558.111779	3.427102	0.001792	0.291792
21	210.079617	0.004760	0.004783	720.964195	3.431862	0.001387	0.291387
22	271.002705	0.003690	0.003704	931.043812	3.435552	0.001074	0.291074
23	349.593490	0.002860	0.002869	1202.046518	3.438412	0.000832	0.290832
24	450.975602	0.002217	0.002222	1551.640008	3.440630	0.000644	0.290644
25	581.758527	0.001719	0.001722	2002.615610	3.442349	0.000499	0.290499
26	750.468500	0.001333	0.001334	2584.374137	3.443681	0.000387	0.290387
27	968.104365	0.001033	0.001034	3334.842636	3.444714	0.000300	0.290300
28	1248.854630	0.000801	0.000801	4302.947001	3.445515	0.000232	0.290232
29	1611.022473	0.000621	0.000621	5551.801631	3.446135	0.000180	0.290180
30	2078.218990	0.000481	0.000481	7162.824104	3.446617	0.000140	0.290140



$$i = 0.30 = 30\%; q = 1.30$$

n	q^n	$\frac{1}{q^n}$	$\frac{1}{q^n - 1}$	$\frac{q^n - 1}{i}$	$\frac{q^n - 1}{q^n i}$	$\frac{i}{q^n - 1}$	$\frac{q^n i}{q^n - 1}$
1	1.300000	0.769231	3.333333	1.000000	0.769231	1.000000	1.300000
2	1.690000	0.591716	1.449275	2.300000	1.360947	0.434783	0.734783
3	2.197000	0.455166	0.835422	3.990000	1.816113	0.250627	0.550627
4	2.856100	0.350128	0.538764	6.187000	2.166241	0.161629	0.461629
5	3.712930	0.269329	0.368605	9.043100	2.435570	0.110582	0.410582
6	4.826809	0.207176	0.261314	12.756030	2.642746	0.078394	0.378394
7	6.274852	0.159366	0.189579	17.582839	2.802112	0.056874	0.356874
8	8.157307	0.122589	0.139717	23.857691	2.924702	0.041915	0.341915
9	10.604499	0.094300	0.104118	32.014998	3.019001	0.031235	0.331235
10	13.785849	0.072538	0.078211	42.619497	3.091539	0.023463	0.323463
11	17.921604	0.055799	0.059096	56.405346	3.147338	0.017729	0.317729
12	23.298085	0.042922	0.044847	74.326950	3.190260	0.013454	0.313454
13	30.287511	0.033017	0.034144	97.625036	3.223277	0.010243	0.310243
14	39.373764	0.025398	0.026059	127.912546	3.248675	0.007818	0.307818
15	51.185893	0.019537	0.019926	167.286310	3.268211	0.005978	0.305978
16	66.541661	0.015028	0.015257	218.472203	3.283239	0.004577	0.304577
17	86.504159	0.011560	0.011695	285.013864	3.294800	0.003509	0.303509
18	112.455407	0.008892	0.008972	371.518023	3.303692	0.002692	0.302692
19	146.192029	0.006840	0.006887	483.973430	3.310532	0.002066	0.302066
20	190.049638	0.005262	0.005290	630.165459	3.315794	0.001587	0.301587
21	247.064529	0.004048	0.004064	820.215097	3.319842	0.001219	0.301219
22	321.183888	0.003113	0.003123	1067.279626	3.322955	0.000937	0.300937
23	417.539054	0.002395	0.002401	1388.463514	3.325350	0.000720	0.300720
24	542.800770	0.001842	0.001846	1806.002568	3.327192	0.000554	0.300554
25	705.641001	0.001417	0.001419	2348.803338	3.328609	0.000426	0.300426
26	917.333302	0.001090	0.001091	3054.444340	3.329700	0.000327	0.300327
27	1192.533293	0.000839	0.000839	3971.777642	3.330538	0.000252	0.300252
28	1550.293280	0.000645	0.000645	5164.310934	3.331183	0.000194	0.300194
29	2015.381264	0.000496	0.000496	6714.604214	3.331679	0.000149	0.300149
30	2619.995644	0.000382	0.000382	8729.985479	3.332061	0.000115	0.300115

