$$S_1^n = \sum_{j=1}^{n} \frac{1}{(1+i)^j} = \frac{(1+i)^n - 1}{i \cdot (1+i)^n}$$

n

i	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
0.00%	1.0000	2.0000	3.0000	4.0000	5.0000	6.0000	7.0000	8.0000	9.0000	10.0000	11.0000	12.0000	13.0000	14.0000	15.0000	16.0000	17.0000	18.0000	19.0000	20.0000	21.0000
0.50%	0.9950	1.9851	2.9702	3.9505	4.9259	5.8964	6.8621	7.8230	8.7791	9.7304	10.6770	11.6189	12.5562	13.4887	14.4166	15.3399	16.2586	17.1728	18.0824	18.9874	19.8880
1.00%	0.9901	1.9704	2.9410	3.9020	4.8534	5.7955	6.7282	7.6517	8.5660	9.4713	10.3676	11.2551	12.1337	13.0037	13.8651	14.7179	15.5623	16.3983	17.2260	18.0456	18.8570
1.50%	0.9852	1.9559	2.9122	3.8544	4.7826	5.6972	6.5982	7.4859	8.3605	9.2222	10.0711	10.9075	11.7315	12.5434	13.3432	14.1313	14.9076	15.6726	16.4262	17.1686	17.9001
2.00%	0.9804	1.9416	2.8839	3.8077	4.7135	5.6014	6.4720	7.3255	8.1622	8.9826	9.7868	10.5753	11.3484	12.1062	12.8493	13.5777	14.2919	14.9920	15.6785	16.3514	17.0112
2.50%	0.9756	1.9274	2.8560	3.7620	4.6458	5.5081	6.3494	7.1701	7.9709	8.7521	9.5142	10.2578	10.9832	11.6909	12.3814	13.0550	13.7122	14.3534	14.9789	15.5892	16.1845
3.00%	0.9709	1.9135	2.8286	3.7171	4.5797	5.4172	6.2303	7.0197	7.7861	8.5302	9.2526	9.9540	10.6350	11.2961	11.9379	12.5611	13.1661	13.7535	14.3238	14.8775	15.4150
3.50%	0.9662	1.8997	2.8016	3.6731	4.5151	5.3286	6.1145	6.8740	7.6077	8.3166	9.0016	9.6633	10.3027	10.9205	11.5174	12.0941	12.6513	13.1897	13.7098	14.2124	14.6980
4.00%	0.9615	1.8861	2.7751	3.6299	4.4518	5.2421	6.0021	6.7327	7.4353	8.1109	8.7605	9.3851	9.9856	10.5631	11.1184	11.6523	12.1657	12.6593	13.1339	13.5903	14.0292
4.50%	0.9569	1.8727	2.7490	3.5875	4.3900	5.1579	5.8927	6.5959	7.2688	7.9127	8.5289	9.1186	9.6829	10.2228	10.7395	11.2340	11.7072	12.1600	12.5933	13.0079	13.4047
5.00%	0.9524	1.8594	2.7232	3.5460	4.3295	5.0757	5.7864	6.4632	7.1078	7.7217	8.3064	8.8633	9.3936	9.8986	10.3797	10.8378	11.2741	11.6896	12.0853	12.4622	12.8212
5.50%	0.9479	1.8463	2.6979	3.5052	4.2703	4.9955	5.6830	6.3346	6.9522	7.5376	8.0925	8.6185	9.1171	9.5896	10.0376	10.4622	10.8646	11.2461	11.6077	11.9504	12.2752
6.00%	0.9434	1.8334	2.6730	3.4651	4.2124	4.9173	5.5824	6.2098	6.8017	7.3601	7.8869	8.3838	8.8527	9.2950	9.7122	10.1059	10.4773	10.8276	11.1581	11.4699	11.7641
6.50%	0.9390	1.8206	2.6485	3.4258	4.1557	4.8410	5.4845	6.0888	6.6561	7.1888	7.6890	8.1587	8.5997	9.0138	9.4027	9.7678	10.1106	10.4325	10.7347	11.0185	11.2850
7.00%	0.9346	1.8080	2.6243	3.3872	4.1002	4.7665	5.3893	5.9713	6.5152	7.0236	7.4987	7.9427	8.3577	8.7455	9.1079	9.4466	9.7632	10.0591	10.3356	10.5940	10.8355
7.50%	0.9302	1.7956	2.6005	3.3493	4.0459	4.6938	5.2966	5.8573	6.3789	6.8641	7.3154	7.7353	8.1258	8.4892	8.8271	9.1415	9.4340	9.7060	9.9591	10.1945	10.4135
8.00%	0.9259	1.7833	2.5771	3.3121	3.9927	4.6229	5.2064	5.7466	6.2469	6.7101	7.1390	7.5361	7.9038	8.2442	8.5595	8.8514	9.1216	9.3719	9.6036	9.8181	10.0168
8.50%	0.9217	1.7711	2.5540	3.2756	3.9406	4.5536	5.1185	5.6392	6.1191	6.5613	6.9690	7.3447	7.6910	8.0101	8.3042	8.5753	8.8252	9.0555	9.2677	9.4633	9.6436
9.00%	0.9174	1.7591	2.5313	3.2397	3.8897	4.4859	5.0330	5.5348	5.9952	6.4177	6.8052	7.1607	7.4869	7.7862	8.0607	8.3126	8.5436	8.7556	8.9501	9.1285	9.2922
9.50%	0.9132	1.7473	2.5089	3.2045	3.8397	4.4198	4.9496	5.4334	5.8753	6.2788	6.6473	6.9838	7.2912	7.5719	7.8282	8.0623	8.2760	8.4713	8.6496	8.8124	8.9611
10.00%	0.9091	1.7355	2.4869	3.1699	3.7908	4.3553	4.8684	5.3349	5.7590	6.1446	6.4951	6.8137	7.1034	7.3667	7.6061	7.8237	8.0216	8.2014	8.3649	8.5136	8.6487
10.50%	0.9050	1.7240	2.4651	3.1359	3.7429	4.2922	4.7893	5.2392	5.6463	6.0148	6.3482	6.6500	6.9230	7.1702	7.3938	7.5962	7.7794	7.9451	8.0952	8.2309	8.3538
11.00%	0.9009	1.7125	2.4437	3.1024	3.6959	4.2305	4.7122	5.1461	5.5370	5.8892	6.2065	6.4924	6.7499	6.9819	7.1909	7.3792	7.5488	7.7016	7.8393	7.9633	8.0751
11.50%	0.8969	1.7012	2.4226	3.0696	3.6499	4.1703	4.6370	5.0556	5.4311	5.7678	6.0697	6.3406	6.5835	6.8013	6.9967	7.1719	7.3291	7.4700	7.5964	7.7098	7.8115
12.00%	0.8929	1.6901	2.4018	3.0373	3.6048	4.1114	4.5638	4.9676	5.3282	5.6502	5.9377	6.1944	6.4235	6.6282	6.8109	6.9740	7.1196	7.2497	7.3658	7.4694	7.5620
12.50%	0.8889	1.6790	2.3813	3.0056	3.5606	4.0538	4.4923	4.8820	5.2285	5.5364	5.8102	6.0535	6.2698	6.4620	6.6329	6.7848	6.9198	7.0398	7.1465	7.2414	7.3256
13.00%	0.8850	1.6681	2.3612	2.9745	3.5172	3.9975	4.4226	4.7988	5.1317	5.4262	5.6869	5.9176	6.1218	6.3025	6.4624	6.6039	6.7291	6.8399	6.9380	7.0248	7.1016
13.50%	0.8811	1.6573	2.3413	2.9438	3.4747	3.9425	4.3546	4.7177	5.0377	5.3195	5.5679	5.7867	5.9794	6.1493	6.2989	6.4308	6.5469	6.6493	6.7395	6.8189	6.8889
14.00%	0.8772	1.6467	2.3216	2.9137	3.4331	3.8887	4.2883	4.6389	4.9464	5.2161	5.4527	5.6603	5.8424	6.0021	6.1422	6.2651	6.3729	6.4674	6.5504	6.6231	6.6870
14.50%	0.8734	1.6361	2.3023	2.8841	3.3922	3.8360	4.2236	4.5621	4.8577	5.1159	5.3414	5.5383	5.7103	5.8606	5.9918	6.1063	6.2064	6.2938	6.3701	6.4368	6.4950
15.00%	0.8696	1.6257	2.2832	2.8550	3.3522	3.7845	4.1604	4.4873	4.7716	5.0188	5.2337	5.4206	5.5831	5.7245	5.8474	5.9542	6.0472	6.1280	6.1982	6.2593	6.3125
15.50%	0.8658	1.6154	2.2644	2.8263	3.3129	3.7341	4.0988	4.4145	4.6879	4.9246	5.1295	5.3069	5.4605	5.5935	5.7087	5.8084	5.8947	5.9695	6.0342	6.0902	6.1387
16.00%	0.8621	1.6052	2.2459	2.7982	3.2743	3.6847	4.0386	4.3436	4.6065	4.8332	5.0286	5.1971	5.3423	5.4675	5.5755	5.6685	5.7487	5.8178	5.8775	5.9288	5.9731
16.50%	0.8584	1.5952	2.2276	2.7705	3.2365	3.6365	3.9798	4.2745	4.5275	4.7446	4.9310	5.0910	5.2283	5.3462	5.4474	5.5342	5.6088	5.6728	5.7277	5.7748	5.8153