

1							2						
Table - 1 [CVF]							Table - 1 [CVF]						
n\r	1%	2%	3%	4%	5%	6%	n\r	7%	8%	9%	10%	11%	12%
1	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200
2	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	2	1.1449	1.1664	1.1881	1.2100	1.2321	1.2544
3	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	3	1.2250	1.2597	1.2950	1.3310	1.3676	1.4049
4	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	4	1.3108	1.3605	1.4116	1.4641	1.5181	1.5735
5	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	5	1.4026	1.4693	1.5386	1.6105	1.6851	1.7623
6	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	6	1.5007	1.5869	1.6771	1.7716	1.8704	1.9738
7	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	7	1.6058	1.7138	1.8280	1.9487	2.0762	2.2107
8	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	8	1.7182	1.8509	1.9926	2.1436	2.3045	2.4760
9	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	9	1.8385	1.9990	2.1719	2.3579	2.5580	2.7731
10	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	10	1.9672	2.1589	2.3674	2.5937	2.8394	3.1058
11	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	11	2.1049	2.3316	2.5804	2.8531	3.1518	3.4785
12	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	12	2.2522	2.5182	2.8127	3.1384	3.4985	3.8960
13	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	13	2.4098	2.7196	3.0658	3.4523	3.8833	4.3635
14	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	14	2.5785	2.9372	3.3417	3.7975	4.3104	4.8871
15	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	15	2.7590	3.1722	3.6425	4.1772	4.7846	5.4736
16	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	16	2.9522	3.4259	3.9703	4.5950	5.3109	6.1304
17	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	17	3.1588	3.7000	4.3276	5.0545	5.8951	6.8660
18	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	18	3.3799	3.9960	4.7171	5.5599	6.5436	7.6900
19	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	19	3.6165	4.3157	5.1417	6.1159	7.2633	8.6128
20	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	20	3.8697	4.6610	5.6044	6.7275	8.0623	9.6463
21	1.2324	1.5157	1.8603	2.2788	2.7860	3.3996	21	4.1406	5.0338	6.1088	7.4002	8.9492	10.8038
22	1.2447	1.5460	1.9161	2.3699	2.9253	3.6035	22	4.4304	5.4365	6.6586	8.1403	9.9336	12.1003
23	1.2572	1.5769	1.9736	2.4647	3.0715	3.8197	23	4.7405	5.8715	7.2579	8.9543	11.0263	13.5523
24	1.2697	1.6084	2.0328	2.5633	3.2251	4.0489	24	5.0724	6.3412	7.9111	9.8497	12.2392	15.1786
25	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	25	5.4274	6.8485	8.6231	10.8347	13.5855	17.0001
26	1.2953	1.6734	2.1566	2.7725	3.5557	4.5494	26	5.8074	7.3964	9.3992	11.9182	15.0799	19.0401
27	1.3082	1.7069	2.2213	2.8834	3.7335	4.8223	27	6.2139	7.9881	10.2451	13.1100	16.7386	21.3249
28	1.3213	1.7410	2.2879	2.9987	3.9201	5.1117	28	6.6488	8.6271	11.1671	14.4210	18.5799	23.8839
29	1.3345	1.7758	2.3566	3.1187	4.1161	5.4184	29	7.1143	9.3173	12.1722	15.8631	20.6237	26.7499
30	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	30	7.6123	10.0627	13.2677	17.4494	22.8923	29.9599

3							4						
Table - 1 [CVF]							Table - 1 [CVF]						
n\r	13%	14%	15%	16%	17%	18%	n\r	19%	20%	21%	22%	23%	24%
1	1.1300	1.1400	1.1500	1.1600	1.1700	1.1800	1	1.1900	1.2000	1.2100	1.2200	1.2300	1.2400
2	1.2769	1.2996	1.3225	1.3456	1.3689	1.3924	2	1.4161	1.4400	1.4641	1.4884	1.5129	1.5376
3	1.4429	1.4815	1.5209	1.5609	1.6016	1.6430	3	1.6852	1.7280	1.7716	1.8158	1.8609	1.9066
4	1.6305	1.6890	1.7490	1.8106	1.8739	1.9388	4	2.0053	2.0736	2.1436	2.2153	2.2889	2.3642
5	1.8424	1.9254	2.0114	2.1003	2.1924	2.2878	5	2.3864	2.4883	2.5937	2.7027	2.8153	2.9316
6	2.0820	2.1950	2.3131	2.4364	2.5652	2.6996	6	2.8398	2.9860	3.1384	3.2973	3.4628	3.6352
7	2.3526	2.5023	2.6600	2.8262	3.0012	3.1855	7	3.3793	3.5832	3.7975	4.0227	4.2593	4.5077
8	2.6584	2.8526	3.0590	3.2784	3.5115	3.7589	8	4.0214	4.2998	4.5950	4.9077	5.2389	5.5895
9	3.0040	3.2519	3.5179	3.8030	4.1084	4.4355	9	4.7854	5.1598	5.5599	5.9874	6.4439	6.9310
10	3.3946	3.7072	4.0456	4.4114	4.8068	5.2338	10	5.6947	6.1917	6.7275	7.3046	7.9259	8.5944
11	3.8359	4.2262	4.6524	5.1173	5.6240	6.1759	11	6.7767	7.4301	8.1403	8.9117	9.7489	10.6571
12	4.3345	4.8179	5.3503	5.9360	6.5801	7.2876	12	8.0642	8.9161	9.8497	10.8722	11.9912	13.2148
13	4.8980	5.4924	6.1528	6.8858	7.6987	8.5994	13	9.5964	10.6993	11.9182	13.2641	14.7491	16.3863
14	5.5348	6.2613	7.0757	7.9875	9.0075	10.1472	14	11.4198	12.8392	14.4210	16.1822	18.1414	20.3191
15	6.2543	7.1379	8.1371	9.2655	10.5387	11.9737	15	13.5895	15.4070	17.4494	19.7423	22.3140	25.1956
16	7.0673	8.1372	9.3576	10.7480	12.3303	14.1290	16	16.1715	18.4884	21.1138	24.0856	27.4462	31.2426
17	7.9861	9.2765	10.7613	12.4677	14.4265	16.6722	17	19.2441	22.1861	25.5477	29.3844	33.7588	38.7408
18	9.0243	10.5752	12.3755	14.4625	16.8790	19.6733	18	22.9005	26.6233	30.9127	35.8490	41.5233	48.0386
19	10.1974	12.0557	14.2318	16.7765	19.7484	23.2144	19	27.2516	31.9480	37.4043	43.7358	51.0737	59.5679
20	11.5231	13.7435	16.3665	19.4608	23.1056	27.3930	20	32.4294	38.3376	45.2593	53.3576	62.8206	73.8641
21	13.0211	15.6676	18.8215	22.5745	27.0336	32.3238	21	38.5910	46.0051	54.7637	65.0963	77.2694	91.5915
22	14.7138	17.8610	21.6447	26.1864	31.6293	38.1421	22	45.9233	55.2061	66.2641	79.4175	95.0413	113.5735
23	16.6266	20.3616	24.8915	30.3762	37.0062	45.0076	23	54.6487	66.2474	80.1795	96.8894	116.9008	140.8312
24	18.7881	23.2122	28.6252	35.2364	43.2973	53.1090	24	65.0320	79.4968	97.0172	118.2050	143.7880	174.6306
25	21.2305	26.4619	32.9190	40.8742	50.6578	62.6686	25	77.3881	95.3962	117.3909	144.2101	176.8593	216.5420
26	23.9905	30.1666	37.8568	47.4141	59.2697	73.9490	26	92.0918	114.4755	142.0429	175.9364	217.5369	268.5121
27	27.1093	34.3899	43.5353	55.0004	69.3455	87.2598	27	109.5893	137.3706	171.8719	214.6424	267.5704	332.9550
28	30.6335	39.2045	50.0656	63.8004	81.1342	102.9666	28	130.4112	164.8447	207.9651	261.8637	329.1115	412.8642
29	34.6158	44.6931	57.5755	74.0085	94.9271	121.5005	29	155.1893	197.8136	251.6377	319.4737	404.8072	511.9516
30	39.1159	50.9502	66.2118	85.8499	111.0647	143.3706	30	184.6753	237.3763	304.4816	389.7579	497.9129	634.8199

5							6						
Table - 2 [CVAF]							Table - 2 [CVAF]						
n\r	1%	2%	3%	4%	5%	6%	n\r	7%	8%	9%	10%	11%	12%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2	2.0700	2.0800	2.0900	2.1000	2.1100	2.1200
3	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3	3.2149	3.2464	3.2781	3.3100	3.3421	3.3744
4	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4	4.4399	4.5061	4.5731	4.6410	4.7097	4.7793
5	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5	5.7507	5.8666	5.9847	6.1051	6.2278	6.3528
6	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	6	7.1533	7.3359	7.5233	7.7156	7.9129	8.1152
7	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	7	8.6540	8.9228	9.2004	9.4872	9.7833	10.0890
8	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	8	10.2598	10.6366	11.0285	11.4359	11.8594	12.2997
9	9.3685	9.7546	10.1591	10.5828	11.0266	11.4913	9	11.9780	12.4876	13.0210	13.5795	14.1640	14.7757
10	10.4622	10.9497	11.4639	12.0061	12.5779	13.1808	10	13.8164	14.4866	15.1929	15.9374	16.7220	17.5487
11	11.5668	12.1687	12.8078	13.4864	14.2068	14.9716	11	15.7836	16.6455	17.5603	18.5312	19.5614	20.6546
12	12.6825	13.4121	14.1920	15.0258	15.9171	16.8699	12	17.8885	18.9771	20.1407	21.3843	22.7132	24.1331
13	13.8093	14.6803	15.6178	16.6268	17.7130	18.8821	13	20.1406	21.4953	22.9534	24.5227	26.2116	28.0291
14	14.9474	15.9739	17.0863	18.2919	19.5986	21.0151	14	22.5505	24.2149	26.0192	27.9750	30.0949	32.3926
15	16.0969	17.2934	18.5989	20.0236	21.5786	23.2760	15	25.1290	27.1521	29.3609	31.7725	34.4054	37.2797
16	17.2579	18.6393	20.1569	21.8245	23.6575	25.6725	16	27.8881	30.3243	33.0034	35.9497	39.1899	42.7533
17	18.4304	20.0121	21.7616	23.6975	25.8404	28.2129	17	30.8402	33.7502	36.9737	40.5447	44.5008	48.8837
18	19.6147	21.4123	23.4144	25.6454	28.1324	30.9057	18	33.9990	37.4502	41.3013	45.5992	50.3959	55.7497
19	20.8109	22.8406	25.1169	27.6712	30.5390	33.7600	19	37.3790	41.4463	46.0185	51.1591	56.9395	63.4397
20	22.0190	24.2974	26.8704	29.7781	33.0660	36.7856	20	40.9955	45.7620	51.1601	57.2750	64.2028	72.0524
21	23.2392	25.7833	28.6765	31.9692	35.7193	39.9927	21	44.8652	50.4229	56.7645	64.0025	72.2651	81.6987
22	24.4716	27.2990	30.5368	34.2480	38.5052	43.3923	22	49.0057	55.4568	62.8733	71.4027	81.2143	92.5026
23	25.7163	28.8450	32.4529	36.6179	41.4305	46.9958	23	53.4361	60.8933	69.5319	79.5430	91.1479	104.6029
24	26.9735	30.4219	34.4265	39.0826	44.5020	50.8156	24	58.1767	66.7648	76.7898	88.4973	102.1742	118.1552
25	28.2432	32.0303	36.4593	41.6459	47.7271	54.8645	25	63.2490	73.1059	84.7009	98.3471	114.4133	133.3339
26	29.5256	33.6709	38.5530	44.3117	51.1135	59.1564	26	68.6765	79.9544	93.3240	109.1818	127.9988	150.3339
27	30.8209	35.3443	40.7096	47.0842	54.6691	63.7058	27	74.4838	87.3508	102.7231	121.0999	143.0786	169.3740
28	32.1291	37.0512	42.9309	49.9676	58.4026	68.5281	28	80.6977	95.3388	112.9682	134.2099	159.8173	190.6989
29	33.4504	38.7922	45.2189	52.9663	62.3227	73.6398	29	87.3465	103.9659	124.1354	148.6309	178.3972	214.5828
30	34.7849	40.5681	47.5754	56.0849	66.4388	79.0582	30	94.4608	113.2832	136.3075	164.4940	199.0209	241.3327

7							8						
Table - 2 [CVAF]							Table - 2 [CVAF]						
n\r	13%	14%	15%	16%	17%	18%	n\r	19%	20%	21%	22%	23%	24%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.1300	2.1400	2.1500	2.1600	2.1700	2.1800	2	2.1900	2.2000	2.2100	2.2200	2.2300	2.2400
3	3.4069	3.4396	3.4725	3.5056	3.5389	3.5724	3	3.6061	3.6400	3.6741	3.7084	3.7429	3.7776
4	4.8498	4.9211	4.9934	5.0665	5.1405	5.2154	4	5.2913	5.3680	5.4457	5.5242	5.6038	5.6842
5	6.4803	6.6101	6.7424	6.8771	7.0144	7.1542	5	7.2966	7.4416	7.5892	7.7396	7.8926	8.0484
6	8.3227	8.5355	8.7537	8.9775	9.2068	9.4420	6	9.6830	9.9299	10.1830	10.4423	10.7079	10.9801
7	10.4047	10.7305	11.0668	11.4139	11.7720	12.1415	7	12.5227	12.9159	13.3214	13.7396	14.1708	14.6153
8	12.7573	13.2328	13.7268	14.2401	14.7733	15.3270	8	15.9020	16.4991	17.1189	17.7623	18.4300	19.1229
9	15.4157	16.0853	16.7858	17.5185	18.2847	19.0859	9	19.9234	20.7989	21.7139	22.6700	23.6690	24.7125
10	18.4197	19.3373	20.3037	21.3215	22.3931	23.5213	10	24.7089	25.9587	27.2738	28.6574	30.1128	31.6434
11	21.8143	23.0445	24.3493	25.7329	27.1999	28.7551	11	30.4035	32.1504	34.0013	35.9620	38.0388	40.2379
12	25.6502	27.2707	29.0017	30.8502	32.8239	34.9311	12	37.1802	39.5805	42.1416	44.8737	47.7877	50.8950
13	29.9847	32.0887	34.3519	36.7862	39.4040	42.2187	13	45.2445	48.4966	51.9913	55.7459	59.7788	64.1097
14	34.8827	37.5811	40.5047	43.6720	47.1027	50.8180	14	54.8409	59.1959	63.9095	69.0100	74.5280	80.4961
15	40.4175	43.8424	47.5804	51.6595	56.1101	60.9653	15	66.2607	72.0351	78.3305	85.1922	92.6694	100.8151
16	46.6717	50.9804	55.7175	60.9250	66.6488	72.9390	16	79.8502	87.4421	95.7799	104.9345	114.9834	126.0108
17	53.7391	59.1176	65.0751	71.6730	78.9792	87.0680	17	96.0218	105.9306	116.8937	129.0201	142.4295	157.2534
18	61.7251	68.3941	75.8364	84.1407	93.4056	103.7403	18	115.2659	128.1167	142.4413	158.4045	176.1883	195.9942
19	70.7494	78.9692	88.2118	98.6032	110.2846	123.4135	19	138.1664	154.7400	173.3540	194.2535	217.7116	244.0328
20	80.9468	91.0249	102.4436	115.3797	130.0329	146.6280	20	165.4180	186.6880	210.7584	237.9893	268.7853	303.6006
21	92.4699	104.7684	118.8101	134.8405	153.1385	174.0210	21	197.8474	225.0256	256.0176	291.3469	331.6059	377.4648
22	105.4910	120.4360	137.6316	157.4150	180.1721	206.3448	22	236.4385	271.0307	310.7813	356.4432	408.8753	469.0563
23	120.2048	138.2970	159.2764	183.6014	211.8013	244.4868	23	282.3618	326.2369	377.0454	435.8607	503.9166	582.6298
24	136.8315	158.6586	184.1678	213.9776	248.8076	289.4945	24	337.0105	392.4842	457.2249	532.7501	620.8174	723.4610
25	155.6196	181.8708	212.7930	249.2140	292.1049	342.6035	25	402.0425	471.9811	554.2422	650.9551	764.6054	898.0916
26	176.8501	208.3327	245.7120	290.0883	342.7627	405.2721	26	479.4306	567.3773	671.6330	795.1653	941.4647	1114.634
27	200.8406	238.4993	283.5688	337.5024	402.0323	479.2211	27	571.5224	681.8528	813.6759	971.1016	1159.002	1383.146
28	227.9499	272.8892	327.1041	392.5028	471.3778	566.4809	28	681.1116	819.2233	985.5479	1185.744	1426.572	1716.101
29	258.5834	312.0937	377.1697	456.3032	552.5121	669.4475	29	811.5228	984.0680	1193.513	1447.608	1755.683	2128.965
30	293.1992	356.7868	434.7451	530.3117	647.4391	790.9480	30	966.7122	1181.8816	1445.151	1767.081	2160.491	2640.916

9							10						
Table - 3 [PVF]							Table - 3 [PVF]						
n\r	1%	2%	3%	4%	5%	6%	n\r	7%	8%	9%	10%	11%	12%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	1	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	2	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	3	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	4	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	5	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	6	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	7	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	8	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	9	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	10	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	11	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	12	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	13	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	14	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	15	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	16	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	17	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	18	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	19	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	20	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	21	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	22	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	23	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	24	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	25	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588
26	0.7720	0.5976	0.4637	0.3607	0.2812	0.2198	26	0.1722	0.1352	0.1064	0.0839	0.0663	0.0525
27	0.7644	0.5859	0.4502	0.3468	0.2678	0.2074	27	0.1609	0.1252	0.0976	0.0763	0.0597	0.0469
28	0.7568	0.5744	0.4371	0.3335	0.2551	0.1956	28	0.1504	0.1159	0.0895	0.0693	0.0538	0.0419
29	0.7493	0.5631	0.4243	0.3207	0.2429	0.1846	29	0.1406	0.1073	0.0822	0.0630	0.0485	0.0374
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	30	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334

11							12						
Table - 3 [PVF]							Table - 3 [PVF]						
n\r	13%	14%	15%	16%	17%	18%	n\r	19%	20%	21%	22%	23%	24%
1	0.8850	0.8772	0.8696	0.8621	0.8547	0.8475	1	0.8403	0.8333	0.8264	0.8197	0.8130	0.8065
2	0.7831	0.7695	0.7561	0.7432	0.7305	0.7182	2	0.7062	0.6944	0.6830	0.6719	0.6610	0.6504
3	0.6931	0.6750	0.6575	0.6407	0.6244	0.6086	3	0.5934	0.5787	0.5645	0.5507	0.5374	0.5245
4	0.6133	0.5921	0.5718	0.5523	0.5337	0.5158	4	0.4987	0.4823	0.4665	0.4514	0.4369	0.4230
5	0.5428	0.5194	0.4972	0.4761	0.4561	0.4371	5	0.4190	0.4019	0.3855	0.3700	0.3552	0.3411
6	0.4803	0.4556	0.4323	0.4104	0.3898	0.3704	6	0.3521	0.3349	0.3186	0.3033	0.2888	0.2751
7	0.4251	0.3996	0.3759	0.3538	0.3332	0.3139	7	0.2959	0.2791	0.2633	0.2486	0.2348	0.2218
8	0.3762	0.3506	0.3269	0.3050	0.2848	0.2660	8	0.2487	0.2326	0.2176	0.2038	0.1909	0.1789
9	0.3329	0.3075	0.2843	0.2630	0.2434	0.2255	9	0.2090	0.1938	0.1799	0.1670	0.1552	0.1443
10	0.2946	0.2697	0.2472	0.2267	0.2080	0.1911	10	0.1756	0.1615	0.1486	0.1369	0.1262	0.1164
11	0.2607	0.2366	0.2149	0.1954	0.1778	0.1619	11	0.1476	0.1346	0.1228	0.1122	0.1026	0.0938
12	0.2307	0.2076	0.1869	0.1685	0.1520	0.1372	12	0.1240	0.1122	0.1015	0.0920	0.0834	0.0757
13	0.2042	0.1821	0.1625	0.1452	0.1299	0.1163	13	0.1042	0.0935	0.0839	0.0754	0.0678	0.0610
14	0.1807	0.1597	0.1413	0.1252	0.1110	0.0985	14	0.0876	0.0779	0.0693	0.0618	0.0551	0.0492
15	0.1599	0.1401	0.1229	0.1079	0.0949	0.0835	15	0.0736	0.0649	0.0573	0.0507	0.0448	0.0397
16	0.1415	0.1229	0.1069	0.0930	0.0811	0.0708	16	0.0618	0.0541	0.0474	0.0415	0.0364	0.0320
17	0.1252	0.1078	0.0929	0.0802	0.0693	0.0600	17	0.0520	0.0451	0.0391	0.0340	0.0296	0.0258
18	0.1108	0.0946	0.0808	0.0691	0.0592	0.0508	18	0.0437	0.0376	0.0323	0.0279	0.0241	0.0208
19	0.0981	0.0829	0.0703	0.0596	0.0506	0.0431	19	0.0367	0.0313	0.0267	0.0229	0.0196	0.0168
20	0.0868	0.0728	0.0611	0.0514	0.0433	0.0365	20	0.0308	0.0261	0.0221	0.0187	0.0159	0.0135
21	0.0768	0.0638	0.0531	0.0443	0.0370	0.0309	21	0.0259	0.0217	0.0183	0.0154	0.0129	0.0109
22	0.0680	0.0560	0.0462	0.0382	0.0316	0.0262	22	0.0218	0.0181	0.0151	0.0126	0.0105	0.0088
23	0.0601	0.0491	0.0402	0.0329	0.0270	0.0222	23	0.0183	0.0151	0.0125	0.0103	0.0086	0.0071
24	0.0532	0.0431	0.0349	0.0284	0.0231	0.0188	24	0.0154	0.0126	0.0103	0.0085	0.0070	0.0057
25	0.0471	0.0378	0.0304	0.0245	0.0197	0.0160	25	0.0129	0.0105	0.0085	0.0069	0.0057	0.0046
26	0.0417	0.0331	0.0264	0.0211	0.0169	0.0135	26	0.0109	0.0087	0.0070	0.0057	0.0046	0.0037
27	0.0369	0.0291	0.0230	0.0182	0.0144	0.0115	27	0.0091	0.0073	0.0058	0.0047	0.0037	0.0030
28	0.0326	0.0255	0.0200	0.0157	0.0123	0.0097	28	0.0077	0.0061	0.0048	0.0038	0.0030	0.0024
29	0.0289	0.0224	0.0174	0.0135	0.0105	0.0082	29	0.0064	0.0051	0.0040	0.0031	0.0025	0.0020
30	0.0256	0.0196	0.0151	0.0116	0.0090	0.0070	30	0.0054	0.0042	0.0033	0.0026	0.0020	0.0016

13							14						
Table - 4 [PVAf]							Table - 4 [PVAf]						
n\r	1%	2%	3%	4%	5%	6%	n\r	7%	8%	9%	10%	11%	12%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	1	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	2	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	3	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	4	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	5	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	6	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	7	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	8	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	9	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	10	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	11	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	12	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	13	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	14	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	15	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	16	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	17	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	18	10.0591	9.3719	8.7556	8.2014	7.7016	7.2497
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	19	10.3356	9.6036	8.9501	8.3649	7.8393	7.3658
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	20	10.5940	9.8181	9.1285	8.5136	7.9633	7.4694
21	18.8570	17.0112	15.4150	14.0292	12.8212	11.7641	21	10.8355	10.0168	9.2922	8.6487	8.0751	7.5620
22	19.6604	17.6580	15.9369	14.4511	13.1630	12.0416	22	11.0612	10.2007	9.4424	8.7715	8.1757	7.6446
23	20.4558	18.2922	16.4436	14.8568	13.4886	12.3034	23	11.2722	10.3711	9.5802	8.8832	8.2664	7.7184
24	21.2434	18.9139	16.9355	15.2470	13.7986	12.5504	24	11.4693	10.5288	9.7066	8.9847	8.3481	7.7843
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	25	11.6536	10.6748	9.8226	9.0770	8.4217	7.8431
26	22.7952	20.1210	17.8768	15.9828	14.3752	13.0032	26	11.8258	10.8100	9.9290	9.1609	8.4881	7.8957
27	23.5596	20.7069	18.3270	16.3296	14.6430	13.2105	27	11.9867	10.9352	10.0266	9.2372	8.5478	7.9426
28	24.3164	21.2813	18.7641	16.6631	14.8981	13.4062	28	12.1371	11.0511	10.1161	9.3066	8.6016	7.9844
29	25.0658	21.8444	19.1885	16.9837	15.1411	13.5907	29	12.2777	11.1584	10.1983	9.3696	8.6501	8.0218
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	30	12.4090	11.2578	10.2737	9.4269	8.6938	8.0552

15							16						
Table - 4 [PVAf]							Table - 4 [PVAf]						
n\r	13%	14%	15%	16%	17%	18%	n\r	19%	20%	21%	22%	23%	24%
1	0.8850	0.8772	0.8696	0.8621	0.8547	0.8475	1	0.8403	0.8333	0.8264	0.8197	0.8130	0.8065
2	1.6681	1.6467	1.6257	1.6052	1.5852	1.5656	2	1.5465	1.5278	1.5095	1.4915	1.4740	1.4568
3	2.3612	2.3216	2.2832	2.2459	2.2096	2.1743	3	2.1399	2.1065	2.0739	2.0422	2.0114	1.9813
4	2.9745	2.9137	2.8550	2.7982	2.7432	2.6901	4	2.6386	2.5887	2.5404	2.4936	2.4483	2.4043
5	3.5172	3.4331	3.3522	3.2743	3.1993	3.1272	5	3.0576	2.9906	2.9260	2.8636	2.8035	2.7454
6	3.9975	3.8887	3.7845	3.6847	3.5892	3.4976	6	3.4098	3.3255	3.2446	3.1669	3.0923	3.0205
7	4.4226	4.2883	4.1604	4.0386	3.9224	3.8115	7	3.7057	3.6046	3.5079	3.4155	3.3270	3.2423
8	4.7988	4.6389	4.4873	4.3436	4.2072	4.0776	8	3.9544	3.8372	3.7256	3.6193	3.5179	3.4212
9	5.1317	4.9464	4.7716	4.6065	4.4506	4.3030	9	4.1633	4.0310	3.9054	3.7863	3.6731	3.5655
10	5.4262	5.2161	5.0188	4.8332	4.6586	4.4941	10	4.3389	4.1925	4.0541	3.9232	3.7993	3.6819
11	5.6869	5.4527	5.2337	5.0286	4.8364	4.6560	11	4.4865	4.3271	4.1769	4.0354	3.9018	3.7757
12	5.9176	5.6603	5.4206	5.1971	4.9884	4.7932	12	4.6105	4.4392	4.2784	4.1274	3.9852	3.8514
13	6.1218	5.8424	5.5831	5.3423	5.1183	4.9095	13	4.7147	4.5327	4.3624	4.2028	4.0530	3.9124
14	6.3025	6.0021	5.7245	5.4675	5.2293	5.0081	14	4.8023	4.6106	4.4317	4.2646	4.1082	3.9616
15	6.4624	6.1422	5.8474	5.5755	5.3242	5.0916	15	4.8759	4.6755	4.4890	4.3152	4.1530	4.0013
16	6.6039	6.2651	5.9542	5.6685	5.4053	5.1624	16	4.9377	4.7296	4.5364	4.3567	4.1894	4.0333
17	6.7291	6.3729	6.0472	5.7487	5.4746	5.2223	17	4.9897	4.7746	4.5755	4.3908	4.2190	4.0591
18	6.8399	6.4674	6.1280	5.8178	5.5339	5.2732	18	5.0333	4.8122	4.6079	4.4187	4.2431	4.0799
19	6.9380	6.5504	6.1982	5.8775	5.5845	5.3162	19	5.0700	4.8435	4.6346	4.4415	4.2627	4.0967
20	7.0248	6.6231	6.2593	5.9288	5.6278	5.3527	20	5.1009	4.8696	4.6567	4.4603	4.2786	4.1103
21	7.1016	6.6870	6.3125	5.9731	5.6648	5.3837	21	5.1268	4.8913	4.6750	4.4756	4.2916	4.1212
22	7.1695	6.7429	6.3587	6.0113	5.6964	5.4099	22	5.1486	4.9094	4.6900	4.4882	4.3021	4.1300
23	7.2297	6.7921	6.3988	6.0442	5.7234	5.4321	23	5.1668	4.9245	4.7025	4.4985	4.3106	4.1371
24	7.2829	6.8351	6.4338	6.0726	5.7465	5.4509	24	5.1822	4.9371	4.7128	4.5070	4.3176	4.1428
25	7.3300	6.8729	6.4641	6.0971	5.7662	5.4669	25	5.1951	4.9476	4.7213	4.5139	4.3232	4.1474
26	7.3717	6.9061	6.4906	6.1182	5.7831	5.4804	26	5.2060	4.9563	4.7284	4.5196	4.3278	4.1511
27	7.4086	6.9352	6.5135	6.1364	5.7975	5.4919	27	5.2151	4.9636	4.7342	4.5243	4.3316	4.1542
28	7.4412	6.9607	6.5335	6.1520	5.8099	5.5016	28	5.2228	4.9697	4.7390	4.5281	4.3346	4.1566
29	7.4701	6.9830	6.5509	6.1656	5.8204	5.5098	29	5.2292	4.9747	4.7430	4.5312	4.3371	4.1585
30	7.4957	7.0027	6.5660	6.1772	5.8294	5.5168	30	5.2347	4.9789	4.7463	4.5338	4.3391	4.1601

Formulae for Present Value

Present Value of Given Amount (Single Amount) :

$$PV = FV \times PVF_{(r,n)} \quad \text{or} \quad \frac{FV}{CVF_{(r,n)}}$$

Present Value of an Annuity (Multiple Amount) :

$$PV = \text{Annuity Amount} \times PVAF_{(r,n)}$$

Present Value of Perpetuity (Infinite Returns) :

$$PV = \frac{\text{Annual Cash Flow}}{r}$$

Formulae for Future Value

Future Value of Given Amount (Single Amount) :

$$FV = PV \times CVF_{(r,n)} \quad \text{or} \quad \frac{PV}{PVF_{(r,n)}}$$

Future Value of Annuity (Multiple Amount) :

$$FV = \text{Annuity Amount} \times CVAF_{(r,n)}$$

Future Value of Annuity Due (Multiple Amount) :

$$FV = \text{Annuity Amount} \times [CVAF_{(r,n)} - 1]$$

Abbreviations Used :

FV	=	Future Value
PV	=	Present Value
r	=	Rate of Return / Inflation
n	=	Period / No. of Years / No. of Months etc.
PVF	=	Present Value Factor
PVAF	=	Present Value of Annuity Factor
CVF	=	Compound Value Factor
CVAF	=	Compound Value of Annuity Factor

Calculation of Tables though Calculator

For PVF Press the following keys:

$$1 \div 1 . \text{Rate}_1 \text{Rate}_2 = = = =$$

Yr1 Yr2 Yr3 Yr4

For PVAF Press the following keys:

$$1 \div 1 . \text{Rate}_1 \text{Rate}_2 = = = = \text{GT}$$

Yr1 Yr2 Yr3 Yr4

For CVF Press the following keys:

$$1 . \text{Rate}_1 \text{Rate}_2 \times = = = =$$

Yr2 Yr3 Yr4 Yr5

For CVAF Press the following keys:

$$1 . \text{Rate}_1 \text{Rate}_2 \times = = = \text{GT} + 2 . \text{Rate}_1 \text{Rate}_2 =$$

Yr3 Yr4 Yr5

Example-1: Calculation of PVF Table for 15%

$$1 \div 1 . 1 5 = = = =$$

Yr1 Yr2 Yr3 Yr4

Example-1: Calculation of CVF Table for 8%

$$1 . 0 8 \times = = = =$$

Yr2 Yr3 Yr4 Yr5