Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate

n = number of periods until payment

Discount rate (r)

Perioa											
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
	110/	100/	100/	1.40/	1.50/	1.60/	1 70/	1.00/	1.00/	000/	
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate

n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.004	12·106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	12% 0·893	13% 0·885	14% 0·877	15% 0·870	1 6% 0·862	17% 0·855	18% 0.847	19% 0·840	20% 0.833	1
1 2	0·901 1·713	0·893 1·690	0·885 1·668	0·877 1·647	0·870 1·626	0·862 1·605	0·855 1·585	0·847 1·566	0·840 1·547	0·833 1·528	2
1 2 3	0·901 1·713 2·444	0·893 1·690 2·402	0·885 1·668 2·361	0·877 1·647 2·322	0·870 1·626 2·283	0·862 1·605 2·246	0·855 1·585 2·210	0·847 1·566 2·174	0·840 1·547 2·140	0·833 1·528 2·106	2
1 2 3 4	0·901 1·713 2·444 3·102	0·893 1·690 2·402 3·037	0·885 1·668 2·361 2·974	0·877 1·647 2·322 2·914	0·870 1·626 2·283 2·855	0·862 1·605 2·246 2·798	0·855 1·585 2·210 2·743	0·847 1·566 2·174 2·690	0·840 1·547 2·140 2·639	0·833 1·528 2·106 2·589	2 3 4
1 2 3	0·901 1·713 2·444	0·893 1·690 2·402	0·885 1·668 2·361	0·877 1·647 2·322	0·870 1·626 2·283	0·862 1·605 2·246	0·855 1·585 2·210	0·847 1·566 2·174	0·840 1·547 2·140	0·833 1·528 2·106	2
1 2 3 4 5	0·901 1·713 2·444 3·102 3·696	0·893 1·690 2·402 3·037 3·605	0.885 1.668 2.361 2.974 3.517	0·877 1·647 2·322 2·914 3·433	0·870 1·626 2·283 2·855 3·352	0·862 1·605 2·246 2·798 3·274 3·685	0·855 1·585 2·210 2·743 3·199	0·847 1·566 2·174 2·690 3·127	0.840 1.547 2.140 2.639 3.058	0·833 1·528 2·106 2·589 2·991	2 3 4 5
1 2 3 4 5	0·901 1·713 2·444 3·102 3·696 4·231 4·712	0·893 1·690 2·402 3·037 3·605 4·111 4·564	0·885 1·668 2·361 2·974 3·517 3·998 4·423	0·877 1·647 2·322 2·914 3·433 3·889 4·288	0·870 1·626 2·283 2·855 3·352 3·784 4·160	0·862 1·605 2·246 2·798 3·274 3·685 4·039	0·855 1·585 2·210 2·743 3·199 3·589 3·922	0·847 1·566 2·174 2·690 3·127 3·498 3·812	0·840 1·547 2·140 2·639 3·058 3·410 3·706	0·833 1·528 2·106 2·589 2·991 3·326 3·605	2 3 4 5 6 7
1 2 3 4 5 6 7 8	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837	2 3 4 5 6 7 8
1 2 3 4 5 6 7 8	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146 5·537	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968 5·328	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799 5·132	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639 4·946	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487 4·772	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344 4·607	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078 4·303	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954 4·163	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837 4·031	2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 8	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837	2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146 5·537 5·889	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968 5·328 5·650 5·938	0.885 1.668 2.361 2.974 3.517 3.998 4.423 4.799 5.132 5.426	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639 4·946 5·216 5·453	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487 4·772 5·019 5·234	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344 4·607 4·833 5·029	0.855 1.585 2.210 2.743 3.199 3.589 3.922 4.207 4.451 4.659	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078 4·303 4·494 4·656	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954 4·163 4·339	0.833 1.528 2.106 2.589 2.991 3.326 3.605 3.837 4.031 4.192 4.327	2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146 5·537 5·889 6·207 6·492	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968 5·328 5·650 5·938 6·194	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799 5·132 5·426 5·687 5·918	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639 4·946 5·216 5·453 5·660	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487 4·772 5·019 5·234 5·421	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344 4·607 4·833 5·029 5·197	0·855 1·585 2·210 2·743 3·199 3·589 3·922 4·207 4·451 4·659 4·836 4·988	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078 4·303 4·494 4·656 4·793	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954 4·163 4·339 4·486 4·611	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837 4·031 4·192 4·327 4·439	2 3 4 5 6 7 8 9 10
1 2 3 4 5 6 7 8 9 10 11 12 13	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146 5·537 5·889 6·207 6·492 6·750	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968 5·328 5·650 5·938 6·194 6·424	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799 5·132 5·426 5·687 5·918 6·122	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639 4·946 5·216 5·453 5·660 5·842	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487 4·772 5·019 5·234 5·421 5·583	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344 4·607 4·833 5·029 5·197 5·342	0·855 1·585 2·210 2·743 3·199 3·589 3·922 4·207 4·451 4·659 4·836 4·988 5·118	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078 4·303 4·494 4·656 4·793 4·910	0.840 1.547 2.140 2.639 3.058 3.410 3.706 3.954 4.163 4.339 4.486 4.611 4.715	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837 4·031 4·192 4·327 4·439 4·533	2 3 4 5 6 7 8 9 10 11 12 13
1 2 3 4 5 6 7 8 9 10	0·901 1·713 2·444 3·102 3·696 4·231 4·712 5·146 5·537 5·889 6·207 6·492	0·893 1·690 2·402 3·037 3·605 4·111 4·564 4·968 5·328 5·650 5·938 6·194	0·885 1·668 2·361 2·974 3·517 3·998 4·423 4·799 5·132 5·426 5·687 5·918	0·877 1·647 2·322 2·914 3·433 3·889 4·288 4·639 4·946 5·216 5·453 5·660	0·870 1·626 2·283 2·855 3·352 3·784 4·160 4·487 4·772 5·019 5·234 5·421	0·862 1·605 2·246 2·798 3·274 3·685 4·039 4·344 4·607 4·833 5·029 5·197	0·855 1·585 2·210 2·743 3·199 3·589 3·922 4·207 4·451 4·659 4·836 4·988	0·847 1·566 2·174 2·690 3·127 3·498 3·812 4·078 4·303 4·494 4·656 4·793	0·840 1·547 2·140 2·639 3·058 3·410 3·706 3·954 4·163 4·339 4·486 4·611	0·833 1·528 2·106 2·589 2·991 3·326 3·605 3·837 4·031 4·192 4·327 4·439	2 3 4 5 6 7 8 9 10

End of Question Paper