



تعداد سوالات: تستی: ۳۰ تشریحی: --

نام درس: اقتصاد مهندسی

رشته تحصیلی/ کد درس: مهندسی صنایع - ۱۱۲۲۰۷۹ - مهندسی مدیریت اجرایی - ۱۱۲۲۰۷۹ - مهندسی مدیریت پروژه - ۱۱۲۲۰۷۹

- مهندسی صنایع ارشد - ۱۱۲۲۰۰۷

مجاز است.

ماشین حساب

استفاده از:

TABLE A-8

4.00% COMPOUND INTEREST FACTORS

SINGLE PAYMENTS			UNIFORM SERIES PAYMENTS				
	COMPOUND AMOUNT F/P	PRESENT WORTH P/F	SINKING FUND A/F	COMPOUND AMOUNT F/A	CAPITAL RECOVERY A/P	PRESENT WORTH P/A	N
1	1.0400	0.9615	1.00000	1.000	1.04000	0.9615	1
2	1.0816	0.9246	0.49020	2.040	0.53020	1.8861	2
3	1.1249	0.8890	0.32035	3.122	0.36035	2.7751	3
4	1.1699	0.8548	0.23549	4.246	0.27549	3.6299	4
5	1.2167	0.8219	0.18463	5.416	0.22463	4.4518	5
6	1.2653	0.7903	0.15076	6.633	0.19076	5.2421	6
7	1.3159	0.7599	0.12661	7.898	0.16661	6.0021	7
8	1.3686	0.7307	0.10853	9.214	0.14853	6.7327	8
9	1.4233	0.7026	0.09449	10.583	0.13449	7.4353	9
10	1.4802	0.6756	0.08329	12.006	0.12329	8.1109	10
11	1.5395	0.6496	0.07415	13.486	0.11415	8.7605	11
12	1.6010	0.6246	0.06655	15.026	0.10655	9.3851	12
13	1.6651	0.6006	0.06014	16.627	0.10014	9.9857	13
14	1.7317	0.5775	0.05467	18.292	0.09467	10.5621	14
15	1.8009	0.5553	0.04994	20.024	0.08994	11.1184	15
16	1.8730	0.5339	0.04582	21.825	0.08582	11.6523	16
17	1.9479	0.5134	0.04220	23.697	0.08220	12.1657	17
18	2.0258	0.4936	0.03899	25.645	0.07899	12.6593	18
19	2.1068	0.4746	0.03614	27.671	0.07614	13.1339	19
20	2.1911	0.4564	0.03358	29.778	0.07358	13.5903	20
22	2.3699	0.4220	0.02920	34.248	0.06920	14.4511	22
24	2.5633	0.3901	0.02559	39.083	0.06559	15.2470	24
25	2.6658	0.3751	0.02401	41.646	0.06401	15.6221	25
26	2.7725	0.3607	0.02257	44.312	0.06257	15.9828	26
28	2.9587	0.3335	0.02001	49.968	0.06001	16.6631	28
30	3.2434	0.3083	0.01783	56.085	0.05783	17.2920	30
32	3.5081	0.2851	0.01595	62.701	0.05595	17.8735	32
34	3.7943	0.2636	0.01431	69.858	0.05431	18.4112	34
35	3.9461	0.2534	0.01358	73.652	0.05358	18.6646	35
36	4.1039	0.2437	0.01289	77.598	0.05289	18.9083	36
38	4.4388	0.2253	0.01163	85.977	0.05163	19.3679	38
40	4.8010	0.2083	0.01052	95.025	0.05052	19.7928	40
45	5.8412	0.1712	0.00826	121.029	0.04826	20.7200	45
50	7.1067	0.1407	0.00655	152.667	0.04655	21.4822	50
55	8.6463	0.1157	0.00523	191.159	0.04523	22.1066	55
60	10.5196	0.0951	0.00420	237.990	0.04420	22.6235	60
65	12.7987	0.0781	0.00339	294.968	0.04339	23.0467	65
70	15.5716	0.0642	0.00275	364.290	0.04275	23.3945	70
75	18.9452	0.0528	0.00223	448.630	0.04223	23.6804	75
80	23.0497	0.0434	0.00181	551.243	0.04181	23.9154	80
85	28.0435	0.0357	0.00148	676.068	0.04148	24.1085	85
90	34.1192	0.0293	0.00121	827.981	0.04121	24.2673	90
95	41.5112	0.0241	0.00099	1012.781	0.04099	24.3978	95
100	50.5048	0.0198	0.00081	1237.620	0.04081	24.5050	100



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- مهندسی صنایع ارشد - ۱۱۲۲۰۰۷

مجاز است.

ماشین حساب

استفاده از:

TABLE A-14

10.00% COMPOUND INTEREST FACTORS

SINGLE PAYMENTS			UNIFORM SERIES PAYMENTS				
	COMPOUND AMOUNT F/P	PRESENT WORTH P/F	SINKING FUND A/F	COMPOUND AMOUNT F/A	CAPITAL RECOVERY A/P	PRESENT WORTH P/A	N
1	1.1000	0.9091	1.0000	1.000	1-10001	0.9091	1
2	1.2100	0.8264	0.47619	2.100	0.57619	1.7355	2
3	1.3310	0.7513	0.30212	3.310	0.40212	2.4868	3
4	1.4641	0.6830	0.21547	4.641	0.31547	3.1698	4
5	1.6105	0.6209	0.16380	6.105	0.26380	3.7908	5
6	1.7716	0.5645	0.12961	7.716	0.22961	4.3552	6
7	1.9487	0.5132	0.10541	9.487	0.20541	4.8684	7
8	2.1436	0.4665	0.08744	11.436	0.18744	5.3349	8
9	2.3579	0.4241	0.07364	13.579	0.17364	5.7590	9
10	2.5937	0.3855	0.06275	15.937	0.16275	6.1445	10
11	2.8531	0.3505	0.05396	18.531	0.15396	6.4950	11
12	3.1384	0.3186	0.04676	21.384	0.14676	6.8137	12
13	3.4522	0.2897	0.04078	24.522	0.14078	7.1033	13
14	3.7975	0.2633	0.03575	27.975	0.13575	7.3667	14
15	4.1772	0.2394	0.03147	31.772	0.13147	7.6061	15
16	4.5949	0.2176	0.02782	35.949	0.12782	7.8237	16
17	5.0544	0.1978	0.02466	40.544	0.12466	8.0215	17
18	5.5599	0.1799	0.02193	45.599	0.12193	8.2014	18
19	6.1158	0.1635	0.01955	51.159	0.11955	8.3649	19
20	6.7274	0.1486	0.01746	57.274	0.11746	8.5136	20
22	8.1402	0.1228	0.01401	71.402	0.11401	8.7715	22
24	9.8496	0.1015	0.01130	88.496	0.11130	8.9847	24
25	10.8346	0.0923	0.01017	98.346	0.11017	9.0770	25
26	11.9180	0.0839	0.00916	109.180	0.10916	9.1609	26
28	14.4208	0.0693	0.00745	134.208	0.10745	9.3066	28
30	17.4491	0.0573	0.00608	164.491	0.10608	9.4269	30
32	21.1134	0.0474	0.00497	201.134	0.10497	9.5264	32
34	25.5472	0.0391	0.00407	245.472	0.10407	9.6086	34
35	28.1019	0.0356	0.00369	271.019	0.10369	9.6442	35
36	30.9121	0.0323	0.00334	299.121	0.10334	9.6765	36
38	37.4036	0.0267	0.00275	364.036	0.10275	9.7327	38
40	45.2583	0.0221	0.00226	442.583	0.10226	9.7791	40
45	72.8888	0.0137	0.00139	718.988	0.10139	9.8628	45
50	117.388	0.0085	0.00086	1163.878	0.10086	9.9148	50
55	189.054	0.0053	0.00053	1880.538	0.10053	9.9471	55
60	304.472	0.0033	0.00033	3034.720	0.10033	9.9672	60
65	490.354	0.0020	0.00020	4893.539	0.10020	9.9796	65
70	789.718	0.0013	0.00013	7887.180	0.10013	9.9873	70
75	1271.846	0.0008	0.00008	12708.460	0.10008	9.9921	75
80	2048.315	0.0005	0.00005	20473.160	0.10005	9.9951	80
85	3298.823	0.0003	0.00003	32976.240	0.10003	9.9970	85
90	5312.773	0.0002	0.00002	53117.770	0.10002	9.9981	90
95	8556.250	0.0001	0.00001	85552.500	0.10001	9.9988	95



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- مهندسی صنایع ارشد - ۱۱۲۲۰۰۷

مجاز است.

استفاده از:

TABLE A-15

12.00% COMPOUND INTEREST FACTORS

SINGLE PAYMENTS			UNIFORM SERIES PAYMENTS				
COMPOUND AMOUNT	PRESENT WORTH		SINKING FUND	COMPOUND AMOUNT	CAPITAL RECOVERY	PRESENT WORTH	
N	F/P	P/F	A/F	F/A	A/P	P/A	N
1	1.1200	0.8929	1.00000	1.000	1.12000	0.8929	1
2	1.2544	0.7972	0.47170	2.120	0.59170	1.6900	2
3	1.4049	0.7118	0.29635	3.374	0.41635	2.4018	3
4	1.5735	0.6355	0.20923	4.779	0.32923	3.0373	4
5	1.7623	0.5674	0.15741	6.353	0.27741	3.6048	5
6	1.9738	0.5066	0.12323	8.115	0.24323	4.1114	6
7	2.2107	0.4523	0.09912	10.089	0.21912	4.5638	7
8	2.4760	0.4039	0.08130	12.300	0.20130	4.9676	8
9	2.7731	0.3606	0.06768	14.776	0.18768	5.3283	9
10	3.1058	0.3220	0.05698	17.549	0.17698	5.6502	10
11	3.4785	0.2875	0.04842	20.655	0.16842	5.9377	11
12	3.8960	0.2567	0.04144	24.133	0.16144	6.1944	12
13	4.3635	0.2292	0.03568	28.029	0.15568	6.4236	13
14	4.8871	0.2046	0.03087	32.393	0.15087	6.6282	14
15	5.4736	0.1827	0.02682	37.280	0.14682	6.8109	15
16	6.1304	0.1631	0.02339	42.753	0.14339	6.9740	16
17	6.8660	0.1456	0.02046	48.884	0.14046	7.1196	17
18	7.6900	0.1300	0.01794	55.750	0.13794	7.2497	18
19	8.6127	0.1161	0.01576	63.440	0.13576	7.3658	19
20	9.6463	0.1037	0.01388	72.052	0.13388	7.4695	20
22	12.1003	0.0826	0.01081	92.502	0.13081	7.6446	22
24	15.1786	0.0659	0.00846	118.155	0.12846	7.7843	24
25	17.0000	0.0588	0.00750	133.334	0.12750	7.8431	25
26	19.0400	0.0525	0.00665	150.333	0.12665	7.8957	26
28	23.8838	0.0419	0.00524	190.698	0.12524	7.9844	28
30	29.9598	0.0334	0.00414	241.332	0.12414	8.0552	30
32	37.5816	0.0266	0.00328	304.847	0.12328	8.1116	32
34	47.1423	0.0212	0.00260	384.520	0.12260	8.1566	34
35	52.7994	0.0189	0.00232	431.662	0.12232	8.1755	35
36	59.1353	0.0169	0.00206	484.461	0.12206	8.1924	36
38	74.1794	0.0135	0.00164	609.828	0.12164	8.2210	38
40	93.0506	0.0107	0.00130	767.088	0.12130	8.2438	40
45	163.987	0.0061	0.00074	1358.225	0.12074	8.2825	45
50	289.000	0.0035	0.00042	2400.006	0.12042	8.3045	50



مجاز است.

استفاده از:

TABLE A-16

15.00% COMPOUND INTEREST FACTORS

SINGLE PAYMENTS			UNIFORM SERIES PAYMENTS				
	COMPOUND AMOUNT	PRESENT WORTH	SINKING FUND	COMPOUND AMOUNT	CAPITAL RECOVERY	PRESENT WORTH	
N	F/P	P/F	A/F	F/A	A/P	P/A	N
1	1.1500	0.8696	1.00000	1.000	1.15000	0.8696	1
2	1.3225	0.7561	0.46512	2.150	0.61512	1.6257	2
3	1.5209	0.6575	0.28798	3.472	0.43758	2.2832	3
4	1.7490	0.5718	0.20027	4.993	0.35027	2.8550	4
5	2.0114	0.4972	0.14832	6.742	0.29832	3.3522	5
6	2.3131	0.4323	0.11424	8.754	0.26424	3.7845	6
7	2.6600	0.3759	0.09036	11.067	0.24036	4.1604	7
8	3.0590	0.3269	0.07285	13.727	0.22285	4.4973	8
9	3.5179	0.2843	0.05957	16.786	0.20957	4.7716	9
10	4.0455	0.2472	0.04925	20.304	0.19925	5.0188	10
11	4.6524	0.2149	0.04107	24.349	0.19107	5.2337	11
12	5.3502	0.1869	0.03448	29.002	0.18448	5.4206	12
13	6.1528	0.1625	0.02911	34.352	0.17911	5.5831	13
14	7.0757	0.1413	0.02469	40.505	0.17469	5.7245	14
15	8.1370	0.1229	0.02102	47.580	0.17102	5.8474	15
16	9.3576	0.1069	0.01795	55.717	0.16795	5.9542	16
17	10.7612	0.0929	0.01537	65.075	0.16537	6.0472	17
18	12.3754	0.0808	0.01319	75.836	0.16319	6.1280	18
19	14.2317	0.0703	0.01134	88.211	0.16134	6.1982	19
20	16.3664	0.0611	0.00976	102.443	0.15976	6.2593	20
22	21.6446	0.0462	0.00727	137.631	0.15727	6.3587	22
24	28.6249	0.0349	0.00543	184.166	0.15543	6.4338	24
25	32.9187	0.0304	0.00470	212.791	0.15470	6.4642	25
26	37.8565	0.0264	0.00407	245.710	0.15407	6.4906	26
28	50.0651	0.0200	0.00306	327.101	0.15306	6.5335	28
30	66.2111	0.0151	0.00230	434.741	0.15230	6.5660	30
32	87.5641	0.0114	0.00173	577.094	0.15173	6.5905	32
34	115.803	0.0086	0.00131	765.357	0.15131	6.6091	34
35	133.174	0.0075	0.00113	881.160	0.15113	6.6166	35
36	153.150	0.0065	0.00099	1014.334	0.15099	6.6231	36
38	202.541	0.0049	0.00074	1343.606	0.15074	6.6338	38
40	267.860	0.0037	0.00056	1779.067	0.15056	6.6418	40
45	538.761	0.0019	0.00028	3585.076	0.15028	6.6543	45
50	1083.639	0.0009	0.00014	7217.598	0.15014	6.6605	50



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- مهندسی صنایع ارشد - ۱۱۲۲۰۰۷

مجاز است.

استفاده از:

TABLE A-18

20.00% COMPOUND INTEREST FACTORS

SINGLE PAYMENTS			UNIFORM SERIES PAYMENTS				
N	COMPOUND AMOUNT F/P	PRESENT WORTH P/F	SINKING FUND A/F	COMPOUND AMOUNT F/A	CAPITAL RECOVERY A/P	PRESENT WORTH P/A	N
1	1.2000	0.8333	1.00000	1.000	1.20000	0.8333	1
2	1.4400	0.6944	0.45455	2.200	0.65455	1.5278	2
3	1.7280	0.5787	0.27473	3.640	0.47473	2.1065	3
4	2.0736	0.4823	0.18629	5.368	0.38629	2.5887	4
5	2.4883	0.4019	0.13438	7.442	0.33438	2.9906	5
6	2.9860	0.3349	0.10071	9.930	0.30071	3.3255	6
7	3.5832	0.2791	0.07742	12.916	0.27742	3.6046	7
8	4.2998	0.2326	0.06061	16.499	0.26061	3.8372	8
9	5.1598	0.1938	0.04808	20.799	0.24808	4.0310	9
10	6.1917	0.1615	0.03852	25.959	0.23852	4.1925	10
11	7.4301	0.1346	0.03110	32.150	0.23110	4.3271	11
12	8.9161	0.1122	0.02527	39.580	0.22526	4.4392	12
13	10.6993	0.0935	0.02062	48.497	0.22062	4.5327	13
14	12.8392	0.0779	0.01689	59.196	0.21689	4.6106	14
15	15.4070	0.0649	0.01388	72.035	0.21388	4.6755	15
16	18.4884	0.0541	0.01144	87.442	0.21144	4.7296	16
17	22.1861	0.0451	0.00944	105.930	0.20944	4.7746	17
18	26.6232	0.0376	0.00781	128.116	0.20781	4.8122	18
19	31.9479	0.0313	0.00646	154.740	0.20646	4.8435	19
20	38.3375	0.0261	0.00536	186.687	0.20536	4.8696	20
22	55.2059	0.0181	0.00369	271.030	0.20369	4.9094	22
24	79.4965	0.0126	0.00255	392.483	0.20255	4.9371	24
25	95.3958	0.0105	0.00212	471.979	0.20212	4.9476	25
26	114.4750	0.0087	0.00176	567.375	0.20176	4.9563	26
28	164.8439	0.0061	0.00122	819.220	0.20122	4.9697	28
30	237.3752	0.0042	0.00085	1181.877	0.20085	4.9789	30
32	341.8201	0.0029	0.00059	1704.102	0.20059	4.9854	32
34	492.2207	0.0020	0.00041	2456.105	0.20041	4.9898	34
35	590.6648	0.0017	0.00034	2948.327	0.20034	4.9915	35
36	708.7976	0.0014	0.00028	3538.992	0.20028	4.9929	36
38	1020.668	0.0010	0.00020	5098.344	0.20020	4.9951	38
40	1469.762	0.0007	0.00014	7343.816	0.20014	4.9966	40
45	3657.236	0.0003	0.00005	18281.190	0.20005	4.9986	45
50	9100.363	0.0001	0.00002	45496.870	0.20002	4.9995	50