

Standard Normal Distribution

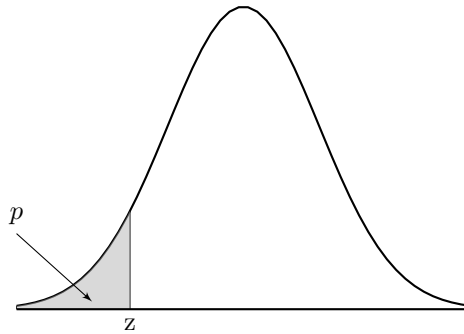


Table entry for z is the probability lying below z .

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
-3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
-3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
-2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
-2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
-2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
-2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
-2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
-2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
-2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
-2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
-2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
-2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
-1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
-1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
-1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
-1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
-1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
-1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
-1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
-1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
-1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
-1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
-0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
-0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
-0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
-0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
-0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
-0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
-0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
-0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
-0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
-0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641

Student t -distribution

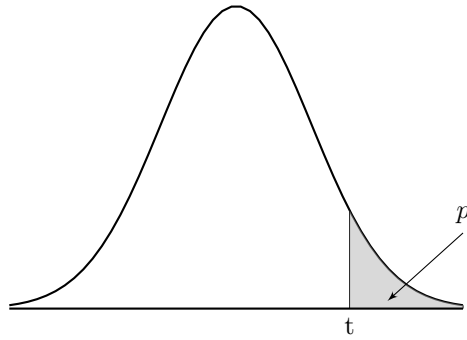
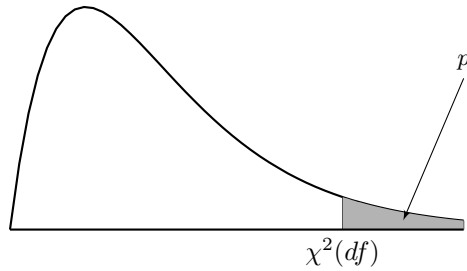


Table entry for p is the point t with probability p lying above it.

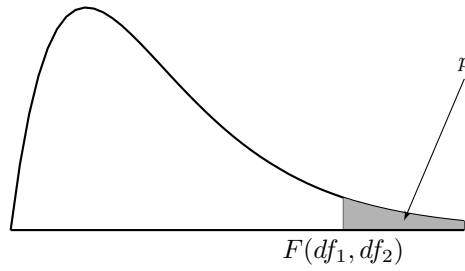
df	Tail Probability p											
	0.25	0.2	0.15	0.1	0.05	0.025	0.02	0.01	0.005	0.0025	0.001	0.0005
1	1.00	1.38	1.96	3.08	6.31	12.71	15.89	31.82	63.66	127.32	318.31	636.62
2	0.82	1.06	1.39	1.89	2.92	4.30	4.85	6.96	9.93	14.09	22.33	31.60
3	0.77	0.98	1.25	1.64	2.35	3.18	3.48	4.54	5.84	7.45	10.21	12.92
4	0.74	0.94	1.19	1.53	2.13	2.78	3.00	3.75	4.60	5.60	7.17	8.61
5	0.73	0.92	1.16	1.48	2.02	2.57	2.76	3.37	4.03	4.77	5.89	6.87
6	0.72	0.91	1.13	1.44	1.94	2.45	2.61	3.14	3.71	4.32	5.21	5.96
7	0.71	0.90	1.12	1.42	1.90	2.37	2.52	3.00	3.50	4.03	4.79	5.41
8	0.71	0.89	1.11	1.40	1.86	2.31	2.45	2.90	3.35	3.83	4.50	5.04
9	0.70	0.88	1.10	1.38	1.83	2.26	2.40	2.82	3.25	3.69	4.30	4.78
10	0.70	0.88	1.09	1.37	1.81	2.23	2.36	2.76	3.17	3.58	4.14	4.59
11	0.70	0.88	1.09	1.36	1.80	2.20	2.33	2.72	3.11	3.50	4.03	4.44
12	0.69	0.87	1.08	1.36	1.78	2.18	2.30	2.68	3.06	3.43	3.93	4.32
13	0.69	0.87	1.08	1.35	1.77	2.16	2.28	2.65	3.01	3.37	3.85	4.22
14	0.69	0.87	1.08	1.34	1.76	2.15	2.26	2.62	2.98	3.33	3.79	4.14
15	0.69	0.87	1.07	1.34	1.75	2.13	2.25	2.60	2.95	3.29	3.73	4.07
16	0.69	0.86	1.07	1.34	1.75	2.12	2.23	2.58	2.92	3.25	3.69	4.01
17	0.69	0.86	1.07	1.33	1.74	2.11	2.22	2.57	2.90	3.22	3.65	3.96
18	0.69	0.86	1.07	1.33	1.73	2.10	2.21	2.55	2.88	3.20	3.61	3.92
19	0.69	0.86	1.07	1.33	1.73	2.09	2.21	2.54	2.86	3.17	3.58	3.88
20	0.69	0.86	1.06	1.32	1.73	2.09	2.20	2.53	2.85	3.15	3.55	3.85
21	0.69	0.86	1.06	1.32	1.72	2.08	2.19	2.52	2.83	3.13	3.53	3.82
22	0.69	0.86	1.06	1.32	1.72	2.07	2.18	2.51	2.82	3.12	3.50	3.79
23	0.69	0.86	1.06	1.32	1.71	2.07	2.18	2.50	2.81	3.10	3.48	3.77
24	0.69	0.86	1.06	1.32	1.71	2.06	2.17	2.49	2.80	3.09	3.47	3.75
25	0.68	0.86	1.06	1.32	1.71	2.06	2.17	2.48	2.79	3.08	3.45	3.73
26	0.68	0.86	1.06	1.31	1.71	2.06	2.16	2.48	2.78	3.07	3.44	3.71
27	0.68	0.85	1.06	1.31	1.70	2.05	2.16	2.47	2.77	3.06	3.42	3.69
28	0.68	0.85	1.06	1.31	1.70	2.05	2.15	2.47	2.76	3.05	3.41	3.67
29	0.68	0.85	1.05	1.31	1.70	2.04	2.15	2.46	2.76	3.04	3.40	3.66
30	0.68	0.85	1.05	1.31	1.70	2.04	2.15	2.46	2.75	3.03	3.38	3.65
40	0.68	0.85	1.05	1.30	1.68	2.02	2.12	2.42	2.70	2.97	3.31	3.55
50	0.68	0.85	1.05	1.30	1.68	2.01	2.11	2.40	2.68	2.94	3.26	3.50
60	0.68	0.85	1.04	1.30	1.67	2.00	2.10	2.39	2.66	2.92	3.23	3.46
70	0.68	0.85	1.04	1.29	1.67	1.99	2.09	2.38	2.65	2.90	3.21	3.44
80	0.68	0.85	1.04	1.29	1.66	1.99	2.09	2.37	2.64	2.89	3.19	3.42
90	0.68	0.85	1.04	1.29	1.66	1.99	2.08	2.37	2.63	2.88	3.18	3.40
100	0.68	0.84	1.04	1.29	1.66	1.98	2.08	2.36	2.63	2.87	3.17	3.39
1000	0.68	0.84	1.04	1.28	1.65	1.96	2.06	2.33	2.58	2.81	3.10	3.30
∞	0.67	0.84	1.04	1.28	1.65	1.96	2.05	2.33	2.58	2.81	3.09	3.29

Pearson χ^2 -distribution



df	Tail Probability p												
	0.25	0.2	0.15	0.1	0.05	0.025	0.02	0.01	0.005	0.0025	0.001	0.0005	
1	0.10	0.06	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.57	0.45	0.33	0.21	0.10	0.05	0.04	0.02	0.01	0.01	0.00	0.00	0.00
3	1.21	1.00	0.80	0.58	0.35	0.22	0.18	0.12	0.07	0.04	0.02	0.01	0.01
4	1.92	1.65	1.37	1.06	0.71	0.48	0.43	0.30	0.21	0.14	0.09	0.06	0.06
5	2.67	2.34	1.99	1.61	1.15	0.83	0.75	0.55	0.41	0.31	0.21	0.16	0.16
6	3.46	3.07	2.66	2.20	1.64	1.24	1.13	0.87	0.68	0.53	0.38	0.30	0.30
7	4.25	3.82	3.36	2.83	2.17	1.69	1.56	1.24	0.99	0.79	0.60	0.48	0.48
8	5.07	4.59	4.08	3.49	2.73	2.18	2.03	1.65	1.34	1.10	0.86	0.71	0.71
9	5.90	5.38	4.82	4.17	3.33	2.70	2.53	2.09	1.74	1.45	1.15	0.97	0.97
10	6.74	6.18	5.57	4.87	3.94	3.25	3.06	2.56	2.16	1.83	1.48	1.26	1.26
11	7.58	6.99	6.34	5.58	4.58	3.82	3.61	3.05	2.60	2.23	1.83	1.59	1.59
12	8.44	7.81	7.11	6.30	5.23	4.40	4.18	3.57	3.07	2.66	2.21	1.93	1.93
13	9.30	8.63	7.90	7.04	5.89	5.01	4.76	4.11	3.56	3.11	2.62	2.31	2.31
14	10.16	9.47	8.70	7.79	6.57	5.63	5.37	4.66	4.08	3.58	3.04	2.70	2.70
15	11.04	10.31	9.50	8.55	7.26	6.26	5.99	5.23	4.60	4.07	3.48	3.11	3.11
16	11.91	11.15	10.31	9.31	7.96	6.91	6.61	5.81	5.14	4.57	3.94	3.54	3.54
17	12.79	12.00	11.12	10.09	8.67	7.56	7.25	6.41	5.70	5.09	4.42	3.98	3.98
18	13.68	12.86	11.95	10.87	9.39	8.23	7.91	7.01	6.26	5.62	4.91	4.44	4.44
19	14.56	13.72	12.77	11.65	10.12	8.91	8.57	7.63	6.84	6.17	5.41	4.91	4.91
20	15.45	14.58	13.60	12.44	10.85	9.59	9.24	8.26	7.43	6.72	5.92	5.40	5.40
21	16.34	15.45	14.44	13.24	11.59	10.28	9.91	8.90	8.03	7.29	6.45	5.90	5.90
22	17.24	16.31	15.28	14.04	12.34	10.98	10.60	9.54	8.64	7.87	6.98	6.40	6.40
23	18.14	17.19	16.12	14.85	13.09	11.69	11.29	10.20	9.26	8.45	7.53	6.92	6.92
24	19.04	18.06	16.97	15.66	13.85	12.40	11.99	10.86	9.89	9.04	8.09	7.45	7.45
25	19.94	18.94	17.82	16.47	14.61	13.12	12.70	11.52	10.52	9.65	8.65	7.99	7.99
26	20.84	19.82	18.67	17.29	15.38	13.84	13.41	12.20	11.16	10.26	9.22	8.54	8.54
27	21.75	20.70	19.53	18.11	16.15	14.57	14.12	12.88	11.81	10.87	9.80	9.09	9.09
28	22.66	21.59	20.39	18.94	16.93	15.31	14.85	13.56	12.46	11.50	10.39	9.66	9.66
29	23.57	22.48	21.25	19.77	17.71	16.05	15.57	14.26	13.12	12.13	10.99	10.23	10.23
30	24.48	23.36	22.11	20.60	18.49	16.79	16.31	14.95	13.79	12.77	11.59	10.80	10.80
40	33.66	32.34	30.86	29.05	26.51	24.43	23.84	22.16	20.71	19.42	17.92	16.91	16.91
50	42.94	41.45	39.75	37.69	34.76	32.36	31.66	29.71	27.99	26.46	24.67	23.46	23.46
60	52.29	50.64	48.76	46.46	43.19	40.48	39.70	37.48	35.53	33.79	31.74	30.34	30.34
70	61.70	59.90	57.84	55.33	51.74	48.76	47.89	45.44	43.27	41.33	39.04	37.47	37.47
80	71.14	69.21	66.99	64.28	60.39	57.15	56.21	53.54	51.17	49.04	46.52	44.79	44.79
90	80.62	78.56	76.19	73.29	69.13	65.65	64.64	61.75	59.20	56.89	54.16	52.28	52.28
100	90.13	87.94	85.44	82.36	77.93	74.22	73.14	70.06	67.33	64.86	61.92	59.90	59.90
1000	969.48	962.18	953.71	943.13	927.59	914.26	910.31	898.91	888.56	879.04	867.48	859.36	859.36

Fisher F -distribution



$p = 0.01$

df_1	df_2																
	1	2	3	4	5	6	7	8	9	10	15	20	25	30	40	60	120
1	4052.18	98.50	34.12	21.20	16.26	13.74	12.25	11.26	10.56	10.04	8.68	8.10	7.77	7.56	7.31	7.08	6.85
2	4999.50	99.00	30.82	18.00	13.27	10.93	9.55	8.65	8.02	7.56	6.36	5.85	5.57	5.39	5.18	4.98	4.79
3	5403.35	99.17	29.46	16.69	12.06	9.78	8.45	7.59	6.99	6.55	5.42	4.94	4.67	4.51	4.31	4.13	3.95
4	5624.58	99.25	28.71	15.98	11.39	9.15	7.85	7.01	6.42	5.99	4.89	4.43	4.18	4.02	3.83	3.65	3.48
5	5763.65	99.30	28.24	15.52	10.97	8.75	7.46	6.63	6.06	5.64	4.56	4.10	3.85	3.70	3.51	3.34	3.17
6	5858.99	99.33	27.91	15.21	10.67	8.47	7.19	6.37	5.80	5.39	4.32	3.87	3.63	3.47	3.29	3.12	2.96
7	5928.36	99.36	27.67	14.98	10.46	8.26	6.99	6.18	5.61	5.20	4.14	3.70	3.46	3.30	3.12	2.95	2.79
8	5981.07	99.37	27.49	14.80	10.29	8.10	6.84	6.03	5.47	5.06	4.00	3.56	3.32	3.17	2.99	2.82	2.66
9	6022.47	99.39	27.34	14.66	10.16	7.98	6.72	5.91	5.35	4.94	3.90	3.46	3.22	3.07	2.89	2.72	2.56
10	6055.85	99.40	27.23	14.55	10.05	7.87	6.62	5.81	5.26	4.85	3.81	3.37	3.13	2.98	2.80	2.63	2.47
15	6157.28	99.43	26.87	14.20	9.72	7.56	6.31	5.51	4.96	4.56	3.52	3.09	2.85	2.70	2.52	2.35	2.19
20	6208.73	99.45	26.69	14.02	9.55	7.40	6.16	5.36	4.81	4.41	3.37	2.94	2.70	2.55	2.37	2.20	2.04
25	6239.82	99.46	26.58	13.91	9.45	7.30	6.06	5.26	4.71	4.31	3.28	2.84	2.60	2.45	2.27	2.10	1.93
30	6260.65	99.47	26.50	13.84	9.38	7.23	5.99	5.20	4.65	4.25	3.21	2.78	2.54	2.39	2.20	2.03	1.86
40	6286.78	99.47	26.41	13.74	9.29	7.14	5.91	5.12	4.57	4.17	3.13	2.69	2.45	2.30	2.11	1.94	1.76
60	6313.03	99.48	26.32	13.65	9.20	7.06	5.82	5.03	4.48	4.08	3.05	2.61	2.36	2.21	2.02	1.84	1.66
120	6339.39	99.49	26.22	13.56	9.11	6.97	5.74	4.95	4.40	4.00	2.96	2.52	2.27	2.11	1.92	1.73	1.53

$p = 0.05$

df_1	df_2																
	1	2	3	4	5	6	7	8	9	10	15	20	25	30	40	60	120
1	161.45	18.51	10.13	7.71	6.61	5.99	5.59	5.32	5.12	4.96	4.54	4.35	4.24	4.17	4.08	4.00	3.92
2	199.50	19.00	9.55	6.94	5.79	5.14	4.74	4.46	4.26	4.10	3.68	3.49	3.38	3.32	3.23	3.15	3.07
3	215.71	19.16	9.28	6.59	5.41	4.76	4.35	4.07	3.86	3.71	3.29	3.10	2.99	2.92	2.84	2.76	2.68
4	224.58	19.25	9.12	6.39	5.19	4.53	4.12	3.84	3.63	3.48	3.06	2.87	2.76	2.69	2.61	2.52	2.45
5	230.16	19.30	9.01	6.26	5.05	4.39	3.97	3.69	3.48	3.33	2.90	2.71	2.60	2.53	2.45	2.37	2.29
6	233.99	19.33	8.94	6.16	4.95	4.28	3.87	3.58	3.37	3.22	2.79	2.60	2.49	2.42	2.34	2.25	2.17
7	236.77	19.35	8.89	6.09	4.88	4.21	3.79	3.50	3.29	3.13	2.71	2.51	2.40	2.33	2.25	2.17	2.09
8	238.88	19.37	8.85	6.04	4.82	4.15	3.73	3.44	3.23	3.07	2.64	2.45	2.34	2.27	2.18	2.10	2.02
9	240.54	19.39	8.81	6.00	4.77	4.10	3.68	3.39	3.18	3.02	2.59	2.39	2.28	2.21	2.12	2.04	1.96
10	241.88	19.40	8.79	5.96	4.74	4.06	3.64	3.35	3.14	2.98	2.54	2.35	2.24	2.17	2.08	1.99	1.91
15	245.95	19.43	8.70	5.86	4.62	3.94	3.51	3.22	3.01	2.85	2.40	2.20	2.09	2.02	1.92	1.84	1.75
20	248.01	19.45	8.66	5.80	4.56	3.87	3.44	3.15	2.94	2.77	2.33	2.12	2.01	1.93	1.84	1.75	1.66
25	249.26	19.46	8.63	5.77	4.52	3.83	3.40	3.11	2.89	2.73	2.28	2.07	1.96	1.88	1.78	1.69	1.60
30	250.09	19.46	8.62	5.75	4.50	3.81	3.38	3.08	2.86	2.70	2.25	2.04	1.92	1.84	1.74	1.65	1.55
40	251.14	19.47	8.59	5.72	4.46	3.77	3.34	3.04	2.83	2.66	2.20	1.99	1.87	1.79	1.69	1.59	1.50
60	252.20	19.48	8.57	5.69	4.43	3.74	3.30	3.00	2.79	2.62	2.16	1.95	1.82	1.74	1.64	1.53	1.43
120	253.25	19.49	8.55	5.66	4.40	3.71	3.27	2.97	2.75	2.58	2.11	1.90	1.77	1.68	1.58	1.47	1.35

$p = 0.10$

df_1	df_2																
	1	2	3	4	5	6	7	8	9	10	15	20	25	30	40	60	120
1	39.86	8.53	5.54	4.54	4.06	3.78	3.59	3.46	3.36	3.29	3.07	2.98	2.92	2.88	2.83	2.79	2.75
2	49.50	9.00	5.46	4.33	3.78	3.46	3.26	3.11	3.01	2.92	2.69	2.59	2.53	2.49	2.44	2.39	2.35
3	53.59	9.16	5.39	4.19	3.62	3.29	3.07	2.92	2.81	2.73	2.49	2.38	2.32	2.28	2.23	2.18	2.13
4	55.83	9.24	5.34	4.11	3.52	3.18	2.96	2.81	2.69	2.60	2.36	2.25	2.18	2.14	2.09	2.04	1.99
5	57.24	9.29	5.31	4.05	3.45	3.11	2.88	2.73	2.61	2.52	2.27	2.16	2.09	2.05	2.00	1.95	1.90
6	58.20	9.33	5.29	4.01	3.40	3.06	2.83	2.67	2.55	2.46	2.21	2.09	2.02	1.98	1.93	1.88	1.82
7	58.91	9.35	5.27	3.98	3.37	3.01	2.79	2.62	2.50	2.41	2.16	2.04	1.97	1.93	1.87	1.82	1.77
8	59.44	9.37	5.25	3.96	3.34	2.98	2.75	2.59	2.47	2.38	2.12	2.00	1.93	1.88	1.83	1.77	1.72
9	59.86	9.38	5.24	3.94	3.32	2.96	2.73	2.56	2.44	2.35	2.09	1.97	1.90	1.85	1.79	1.74	1.68
10	60.20	9.39	5.23	3.92	3.30	2.94	2.70	2.54	2.42	2.32	2.06	1.94	1.87	1.82	1.76	1.71	1.65
15	61.22	9.43	5.20	3.87	3.24	2.87	2.63	2.46	2.34	2.24	1.97	1.84	1.77	1.72	1.66	1.60	1.54
20	61.74	9.44	5.18	3.84	3.21	2.84	2.60	2.42	2.30	2.20	1.92	1.79	1.72	1.67	1.60	1.54	1.48
25	62.05	9.45	5.17	3.83	3.19	2.81	2.57	2.40	2.27	2.17	1.89	1.76	1.68	1.63	1.57	1.50	1.44
30	62.27	9.46	5.17	3.82	3.17	2.80	2.56	2.38	2.25	2.15	1.87	1.74	1.66	1.61	1.54	1.48	1.41
40	62.53	9.47	5.16	3.80	3.16	2.78	2.54	2.36	2.23	2.13	1.84	1.71	1.63	1.57	1.51	1.44	1.37
60	62.79	9.47	5.15	3.79	3.14	2.76	2.51	2.34	2.21	2.11	1.82	1.68	1.59	1.54	1.47	1.40	1.32
120	63.06	9.48	5.14	3.77	3.12	2.74	2.49	2.32	2.18	2.08	1.79	1.64	1.56	1.50	1.43	1.35	1.26