

Standard Normal Distribution

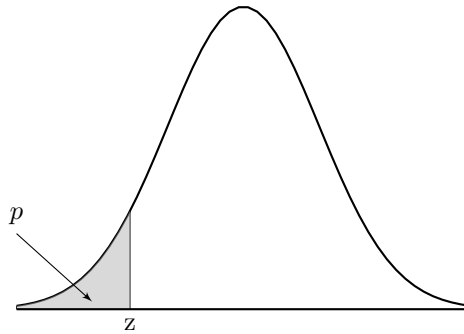


Table entry for z is the probability lying below z .

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

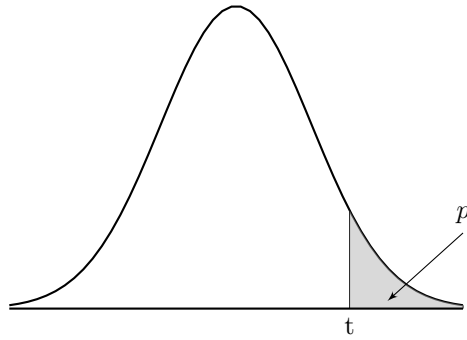
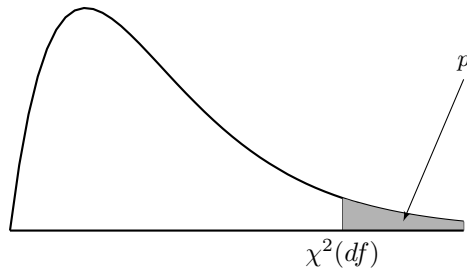


Table entry for p is the point t with probability p lying above it.

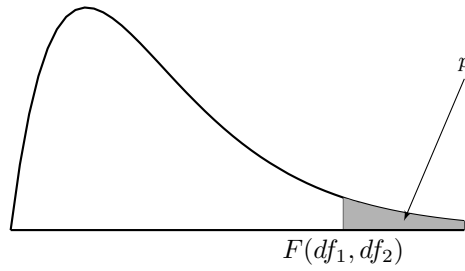
df	Tail Probability p											
	0.25	0.2	0.15	0.1	0.05	0.025	0.02	0.01	0.005	0.0025	0.001	0.0005
1	1.00	1.38	1.96	3.08	6.31	12.71	15.89	31.82	63.66	127.32	318.31	636.62
2	0.82	1.06	1.39	1.89	2.92	4.30	4.85	6.96	9.93	14.09	22.33	31.60
3	0.77	0.98	1.25	1.64	2.35	3.18	3.48	4.54	5.84	7.45	10.21	12.92
4	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	1.32	1.64	2.07	2.71	3.84	5.02	5.41	6.63	7.88	9.14	10.83	12.12
2	2.77	3.22	3.79	4.61	5.99	7.38	7.82	9.21	10.60	11.98	13.82	15.20
3	4.11	4.64	5.32	6.25	7.81	9.35	9.84	11.34	12.84	14.32	16.27	17.73
4	5.39	5.99	6.74	7.78	9.49	11.14	11.67	13.28	14.86	16.42	18.47	20.00
5	6.63	7.29	8.12	9.24	11.07	12.83	13.39	15.09	16.75	18.39	20.52	22.11
6	7.84	8.56	9.45	10.64	12.59	14.45	15.03	16.81	18.55	20.25	22.46	24.10
7	9.04	9.80	10.75	12.02	14.07	16.01	16.62	18.48	20.28	22.04	24.32	26.02
8	10.22	11.03	12.03	13.36	15.51	17.53	18.17	20.09	21.95	23.77	26.12	27.87
9	11.39	12.24	13.29	14.68	16.92	19.02	19.68	21.67	23.59	25.46	27.88	29.67
10	12.55	13.44	14.53	15.99	18.31	20.48	21.16	23.21	25.19	27.11	29.59	31.42
11	13.70	14.63	15.77	17.28	19.68	21.92	22.62	24.72	26.76	28.73	31.26	33.14
12	14.85	15.81	16.99	18.55	21.03	23.34	24.05	26.22	28.30	30.32	32.91	34.82
13	15.98	16.98	18.20	19.81	22.36	24.74	25.47	27.69	29.82	31.88	34.53	36.48
14	17.12	18.15	19.41	21.06	23.68	26.12	26.87	29.14	31.32	33.43	36.12	38.11
15	18.25	19.31	20.60	22.31	25.00	27.49	28.26	30.58	32.80	34.95	37.70	39.72
16	19.37	20.47	21.79	23.54	26.30	28.85	29.63	32.00	34.27	36.46	39.25	41.31
17	20.49	21.61	22.98	24.77	27.59	30.19	31.00	33.41	35.72	37.95	40.79	42.88
18	21.60	22.76	24.16	25.99	28.87	31.53	32.35	34.81	37.16	39.42	42.31	44.43
19	22.72	23.90	25.33	27.20	30.14	32.85	33.69	36.19	38.58	40.88	43.82	45.97
20	23.83	25.04	26.50	28.41	31.41	34.17	35.02	37.57	40.00	42.34	45.31	47.50
21	24.93	26.17	27.66	29.62	32.67	35.48	36.34	38.93	41.40	43.78	46.80	49.01
22	26.04	27.30	28.82	30.81	33.92	36.78	37.66	40.29	42.80	45.20	48.27	50.51
23	27.14	28.43	29.98	32.01	35.17	38.08	38.97	41.64	44.18	46.62	49.73	52.00
24	28.24	29.55	31.13	33.20	36.42	39.36	40.27	42.98	45.56	48.03	51.18	53.48
25	29.34	30.68	32.28	34.38	37.65	40.65	41.57	44.31	46.93	49.44	52.62	54.95
26	30.43	31.79	33.43	35.56	38.89	41.92	42.86	45.64	48.29	50.83	54.05	56.41
27	31.53	32.91	34.57	36.74	40.11	43.19	44.14	46.96	49.64	52.22	55.48	57.86
28	32.62	34.03	35.71	37.92	41.34	44.46	45.42	48.28	50.99	53.59	56.89	59.30
29	33.71	35.14	36.85	39.09	42.56	45.72	46.69	49.59	52.34	54.97	58.30	60.73
30	34.80	36.25	37.99	40.26	43.77	46.98	47.96	50.89	53.67	56.33	59.70	62.16
40	45.62	47.27	49.24	51.81	55.76	59.34	60.44	63.69	66.77	69.70	73.40	76.09
50	56.33	58.16	60.35	63.17	67.50	71.42	72.61	76.15	79.49	82.66	86.66	89.56
60	66.98	68.97	71.34	74.40	79.08	83.30	84.58	88.38	91.95	95.34	99.61	102.69
70	77.58	79.71	82.26	85.53	90.53	95.02	96.39	100.43	104.21	107.81	112.32	115.58
80	88.13	90.41	93.11	96.58	101.88	106.63	108.07	112.33	116.32	120.10	124.84	128.26
90	98.65	101.05	103.90	107.57	113.15	118.14	119.65	124.12	128.30	132.26	137.21	140.78
100	109.14	111.67	114.66	118.50	124.34	129.56	131.14	135.81	140.17	144.29	149.45	153.17

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