Table 1: Critical Values for the Standard Normal Distribution.

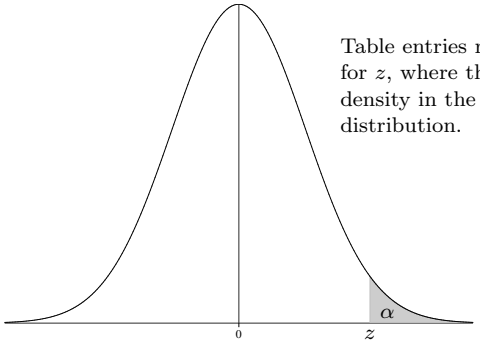

Table entries report the critical value for z, where the shaded area α is the density in the upper tail of the normal distribution.

	Third decimal place in α.									
α	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
0.00		3.090	2.878	2.748	2.652	2.576	2.512	2.457	2.409	2.366
0.01	2.326	2.290	2.257	2.226	2.197	2.170	2.144	2.120	2.097	2.075
0.02	2.054	2.034	2.014	1.995	1.977	1.960	1.943	1.927	1.911	1.896
0.03	1.881	1.866	1.852	1.838	1.825	1.812	1.799	1.787	1.774	1.762
0.04	1.751	1.739	1.728	1.717	1.706	1.695	1.685	1.675	1.665	1.655
0.05	1.645	1.635	1.626	1.616	1.607	1.598	1.589	1.580	1.572	1.563
0.06	1.555	1.546	1.538	1.530	1.522	1.514	1.506	1.499	1.491	1.483
0.07	1.476	1.468	1.461	1.454	1.447	1.440	1.433	1.426	1.419	1.412
0.08	1.405	1.398	1.392	1.385	1.379	1.372	1.366	1.359	1.353	1.347
0.09	1.341	1.335	1.329	1.323	1.317	1.311	1.305	1.299	1.293	1.287
0.10	1.282	1.276	1.270	1.265	1.259	1.254	1.248	1.243	1.237	1.232
0.11	1.227	1.221	1.216	1.211	1.206	1.200	1.195	1.190	1.185	1.180
0.12	1.175	1.170	1.165	1.160	1.155	1.150	1.146	1.141	1.136	1.131
0.13	1.126	1.122	1.117	1.112	1.108	1.103	1.098	1.094	1.089	1.085
0.14	1.080	1.076	1.071	1.067	1.063	1.058	1.054	1.049	1.045	1.041
0.15	1.036	1.032	1.028	1.024	1.019	1.015	1.011	1.007	1.003	0.999
0.16	0.994	0.990	0.986	0.982	0.978	0.974	0.970	0.966	0.962	0.958
0.17	0.954	0.950	0.946	0.942	0.938	0.935	0.931	0.927	0.923	0.919
0.18	0.915	0.912	0.908	0.904	0.900	0.896	0.893	0.889	0.885	0.882
0.19	0.878	0.874	0.871	0.867	0.863	0.860	0.856	0.852	0.849	0.845
0.20	0.842	0.838	0.834	0.831	0.827	0.824	0.820	0.817	0.813	0.810
0.21	0.806	0.803	0.800	0.796	0.793	0.789	0.786	0.782	0.779	0.776
0.22	0.772	0.769	0.765	0.762	0.759	0.755	0.752	0.749	0.745	0.742
0.23	0.739	0.736	0.732	0.729	0.726	0.722	0.719	0.716	0.713	0.710
0.24	0.706	0.703	0.700	0.697	0.693	0.690	0.687	0.684	0.681	0.678
0.25	0.674	0.671	0.668	0.665	0.662	0.659	0.656	0.653	0.650	0.646
0.26	0.643	0.640	0.637	0.634	0.631	0.628	0.625	0.622	0.619	0.616
0.27	0.613	0.610	0.607	0.604	0.601	0.598	0.595	0.592	0.589	0.586
0.28	0.583	0.580	0.577	0.574	0.571	0.568	0.565	0.562	0.559	0.556
0.29	0.553	0.550	0.548	0.545	0.542	0.539	0.536	0.533	0.530	0.527
0.30	0.524	0.522	0.519	0.516	0.513	0.510	0.507	0.504	0.502	0.499
0.31	0.496	0.493	0.490	0.487	0.485	0.482	0.479	0.476	0.473	0.470
0.32	0.468	0.465	0.462	0.459	0.457	0.454	0.451	0.448	0.445	0.443
0.33	0.440	0.437	0.434	0.432	0.429	0.426	0.423	0.421	0.418	0.415
0.34	0.412	0.410	0.407	0.404	0.402	0.399	0.396	0.393	0.391	0.388
0.35	0.385	0.383	0.380	0.377	0.375	0.372	0.369	0.366	0.364	0.361
0.36	0.358	0.356	0.353	0.350	0.348	0.345	0.342	0.340	0.337	0.335
0.37	0.332	0.329	0.327	0.324	0.321	0.319	0.316	0.313	0.311	0.308
0.38	0.305	0.303	0.300	0.298	0.295	0.292	0.290	0.287	0.285	0.282
0.39	0.279	0.277	0.274	0.272	0.269	0.266	0.264	0.261	0.259	0.256
0.40	0.253	0.251	0.248	0.246	0.243	0.240	0.238	0.235	0.233	0.230
0.41	0.228	0.225	0.222	0.220	0.217	0.215	0.212	0.210	0.207	0.204
0.42	0.202	0.199	0.197	0.194	0.192	0.189	0.187	0.184	0.181	0.179
0.43	0.176	0.174	0.171	0.169	0.166	0.164	0.161	0.159	0.156	0.154
0.44	0.151	0.148	0.146	0.143	0.141	0.138	0.136	0.133	0.131	0.128
0.45	0.126	0.123	0.121	0.118	0.116	0.113	0.111	0.108	0.105	0.103
0.46	0.100	0.098	0.095	0.093	0.090	0.088	0.085	0.083	0.080	0.078
0.47	0.075	0.073	0.070	0.068	0.065	0.063	0.060	0.058	0.055	0.053
0.48	0.050	0.048	0.045	0.043	0.040	0.038	0.035	0.033	0.030	0.028
0.49	0.025	0.023	0.020	0.018	0.015	0.013	0.010	0.008	0.005	0.003

Table 2: Critical Values for the Student t Distribution.

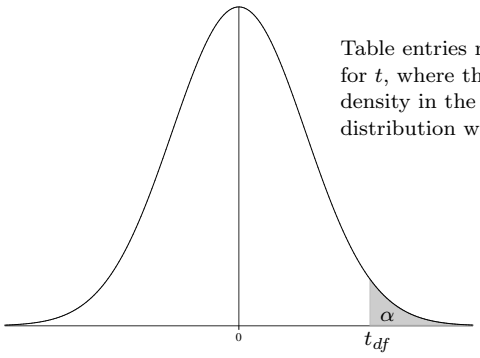

Table entries report the critical value for t, where the shaded area α is the density in the upper tail of the student-t distribution with degrees of freedom df.

	α				
df	0.100	0.050	0.025	0.010	0.005
1	3.078	6.314	12.706	31.821	63.657
2	1.886	2.920	4.303	6.965	9.925
3	1.638	2.353	3.182	4.541	5.841
4	1.533	2.132	2.776	3.747	4.604
5	1.476	2.015	2.571	3.365	4.032
6	1.440	1.943	2.447	3.143	3.707
7	1.415	1.895	2.365	2.998	3.499
8	1.397	1.860	2.306	2.896	3.355
9	1.383	1.833	2.262	2.821	3.250
10	1.372	1.812	2.228	2.764	3.169
11	1.363	1.796	2.201	2.718	3.106
12	1.356	1.782	2.179	2.681	3.055
13	1.350	1.771	2.160	2.650	3.012
14	1.345	1.761	2.145	2.624	2.977
15	1.341	1.753	2.131	2.602	2.947
16	1.337	1.746	2.120	2.583	2.921
17	1.333	1.740	2.110	2.567	2.898
18	1.330	1.734	2.101	2.552	2.878
19	1.328	1.729	2.093	2.539	2.861
20	1.325	1.725	2.086	2.528	2.845
21	1.323	1.721	2.080	2.518	2.831
22	1.321	1.717	2.074	2.508	2.819
23	1.319	1.714	2.069	2.500	2.807
24	1.318	1.711	2.064	2.492	2.797
25	1.316	1.708	2.060	2.485	2.787
26	1.315	1.706	2.056	2.479	2.779
27	1.314	1.703	2.052	2.473	2.771
28	1.313	1.701	2.048	2.467	2.763
29	1.311	1.699	2.045	2.462	2.756
30	1.310	1.697	2.042	2.457	2.750
31	1.309	1.696	2.040	2.453	2.744
32	1.309	1.694	2.037	2.449	2.738
33	1.308	1.692	2.035	2.445	2.733
34	1.307	1.691	2.032	2.441	2.728
35	1.306	1.690	2.030	2.438	2.724
36	1.306	1.688	2.028	2.434	2.719
37	1.305	1.687	2.026	2.431	2.715
38	1.304	1.686	2.024	2.429	2.712
39	1.304	1.685	2.023	2.426	2.708
40	1.303	1.684	2.021	2.423	2.704
41	1.303	1.683	2.020	2.421	2.701
42	1.302	1.682	2.018	2.418	2.698
43	1.302	1.681	2.017	2.416	2.695
44	1.301	1.680	2.015	2.414	2.692
45	1.301	1.679	2.014	2.412	2.690
46	1.300	1.679	2.013	2.410	2.687
47	1.300	1.678	2.012	2.408	2.685
48	1.299	1.677	2.011	2.407	2.682
49	1.299	1.677	2.010	2.405	2.680
50	1.299	1.676	2.009	2.403	2.678

	α				
df	0.100	0.050	0.025	0.010	0.005
51	1.298	1.675	2.008	2.402	2.676
52	1.298	1.675	2.007	2.400	2.674
53	1.298	1.674	2.006	2.399	2.672
54	1.297	1.674	2.005	2.397	2.670
55	1.297	1.673	2.004	2.396	2.668
56	1.297	1.673	2.003	2.395	2.667
57	1.297	1.672	2.002	2.394	2.665
58	1.296	1.672	2.002	2.392	2.663
59	1.296	1.671	2.001	2.391	2.662
60	1.296	1.671	2.000	2.390	2.660
61	1.296	1.670	2.000	2.389	2.659
62	1.295	1.670	1.999	2.388	2.657
63	1.295	1.669	1.998	2.387	2.656
64	1.295	1.669	1.998	2.386	2.655
65	1.295	1.669	1.997	2.385	2.654
66	1.295	1.668	1.997	2.384	2.652
67	1.294	1.668	1.996	2.383	2.651
68	1.294	1.668	1.995	2.382	2.650
69	1.294	1.667	1.995	2.382	2.649
70	1.294	1.667	1.994	2.381	2.648
71	1.294	1.667	1.994	2.380	2.647
72	1.293	1.666	1.993	2.379	2.646
73	1.293	1.666	1.993	2.379	2.645
74	1.293	1.666	1.993	2.378	2.644
75	1.293	1.665	1.992	2.377	2.643
76	1.293	1.665	1.992	2.376	2.642
77	1.293	1.665	1.991	2.376	2.641
78	1.292	1.665	1.991	2.375	2.640
79	1.292	1.664	1.990	2.374	2.640
80	1.292	1.664	1.990	2.374	2.639
81	1.292	1.664	1.990	2.373	2.638
82	1.292	1.664	1.989	2.373	2.637
83	1.292	1.663	1.989	2.372	2.636
84	1.292	1.663	1.989	2.372	2.636
85	1.292	1.663	1.988	2.371	2.635
86	1.291	1.663	1.988	2.370	2.634
87	1.291	1.663	1.988	2.370	2.634
88	1.291	1.662	1.987	2.369	2.633
89	1.291	1.662	1.987	2.369	2.632
90	1.291	1.662	1.987	2.368	2.632
91	1.291	1.662	1.986	2.368	2.631
92	1.291	1.662	1.986	2.368	2.630
93	1.291	1.661	1.986	2.367	2.630
94	1.291	1.661	1.986	2.367	2.629
95	1.291	1.661	1.985	2.366	2.629
100	1.290	1.660	1.984	2.364	2.626
150	1.287	1.655	1.976	2.351	2.609
200	1.286	1.653	1.972	2.345	2.601
500	1.283	1.648	1.965	2.334	2.586
∞	1.282	1.645	1.960	2.326	2.576

Table 3: Critical Values for the χ^2 Distribution.

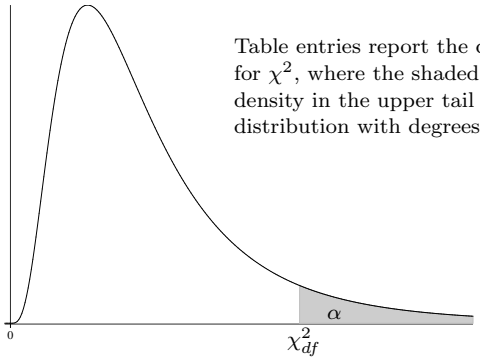

Table entries report the critical value for χ^2, where the shaded area α is the density in the upper tail of the χ^2 distribution with degrees of freedom df.

	α				
df	0.100	0.050	0.025	0.010	0.005
1	2.706	3.841	5.024	6.635	7.879
2	4.605	5.991	7.378	9.210	10.597
3	6.251	7.815	9.348	11.345	12.838
4	7.779	9.488	11.143	13.277	14.860
5	9.236	11.070	12.833	15.086	16.750
6	10.645	12.592	14.449	16.812	18.548
7	12.017	14.067	16.013	18.475	20.278
8	13.362	15.507	17.535	20.090	21.955
9	14.684	16.919	19.023	21.666	23.589
10	15.987	18.307	20.483	23.209	25.188
11	17.275	19.675	21.920	24.725	26.757
12	18.549	21.026	23.337	26.217	28.300
13	19.812	22.362	24.736	27.688	29.819
14	21.064	23.685	26.119	29.141	31.319
15	22.307	24.996	27.488	30.578	32.801
16	23.542	26.296	28.845	32.000	34.267
17	24.769	27.587	30.191	33.409	35.718
18	25.989	28.869	31.526	34.805	37.156
19	27.204	30.144	32.852	36.191	38.582
20	28.412	31.410	34.170	37.566	39.997
21	29.615	32.671	35.479	38.932	41.401
22	30.813	33.924	36.781	40.289	42.796
23	32.007	35.172	38.076	41.638	44.181
24	33.196	36.415	39.364	42.980	45.559
25	34.382	37.652	40.646	44.314	46.928
26	35.563	38.885	41.923	45.642	48.290
27	36.741	40.113	43.195	46.963	49.645
28	37.916	41.337	44.461	48.278	50.993
29	39.087	42.557	45.722	49.588	52.336
30	40.256	43.773	46.979	50.892	53.672
31	41.422	44.985	48.232	52.191	55.003
32	42.585	46.194	49.480	53.486	56.328
33	43.745	47.400	50.725	54.776	57.648
34	44.903	48.602	51.966	56.061	58.964
35	46.059	49.802	53.203	57.342	60.275
36	47.212	50.998	54.437	58.619	61.581
37	48.363	52.192	55.668	59.893	62.883
38	49.513	53.384	56.896	61.162	64.181
39	50.660	54.572	58.120	62.428	65.476
40	51.805	55.758	59.342	63.691	66.766
41	52.949	56.942	60.561	64.950	68.053
42	54.090	58.124	61.777	66.206	69.336
43	55.230	59.304	62.990	67.459	70.616
44	56.369	60.481	64.201	68.710	71.893
45	57.505	61.656	65.410	69.957	73.166
46	58.641	62.830	66.617	71.201	74.437
47	59.774	64.001	67.821	72.443	75.704
48	60.907	65.171	69.023	73.683	76.969
49	62.038	66.339	70.222	74.919	78.231
50	63.167	67.505	71.420	76.154	79.490

	α				
df	0.100	0.050	0.025	0.010	0.005
51	64.295	68.669	72.616	77.386	80.747
52	65.422	69.832	73.810	78.616	82.001
53	66.548	70.993	75.002	79.843	83.253
54	67.673	72.153	76.192	81.069	84.502
55	68.796	73.311	77.380	82.292	85.749
56	69.919	74.468	78.567	83.513	86.994
57	71.040	75.624	79.752	84.733	88.236
58	72.160	76.778	80.936	85.950	89.477
59	73.279	77.931	82.117	87.166	90.715
60	74.397	79.082	83.298	88.379	91.952
61	75.514	80.232	84.476	89.591	93.186
62	76.630	81.381	85.654	90.802	94.419
63	77.745	82.529	86.830	92.010	95.649
64	78.860	83.675	88.004	93.217	96.878
65	79.973	84.821	89.177	94.422	98.105
66	81.085	85.965	90.349	95.626	99.330
67	82.197	87.108	91.519	96.828	100.554
68	83.308	88.250	92.689	98.028	101.776
69	84.418	89.391	93.856	99.228	102.996
70	85.527	90.531	95.023	100.425	104.215
71	86.635	91.670	96.189	101.621	105.432
72	87.743	92.808	97.353	102.816	106.648
73	88.850	93.945	98.516	104.010	107.862
74	89.956	95.081	99.678	105.202	109.074
75	91.061	96.217	100.839	106.393	110.286
76	92.166	97.351	101.999	107.583	111.495
77	93.270	98.484	103.158	108.771	112.704
78	94.374	99.617	104.316	109.958	113.911
79	95.476	100.749	105.473	111.144	115.117
80	96.578	101.879	106.629	112.329	116.321
81	97.680	103.010	107.783	113.512	117.524
82	98.780	104.139	108.937	114.695	118.726
83	99.880	105.267	110.090	115.876	119.927
84	100.980	106.395	111.242	117.057	121.126
85	102.079	107.522	112.393	118.236	122.325
86	103.177	108.648	113.544	119.414	123.522
87	104.275	109.773	114.693	120.591	124.718
88	105.372	110.898	115.841	121.767	125.913
89	106.469	112.022	116.989	122.942	127.106
90	107.565	113.145	118.136	124.116	128.299
91	108.661	114.268	119.282	125.289	129.491
92	109.756	115.390	120.427	126.462	130.681
93	110.850	116.511	121.571	127.633	131.871
94	111.944	117.632	122.715	128.803	133.059
95	113.038	118.752	123.858	129.973	134.247
96	114.131	119.871	125.000	131.141	135.433
97	115.223	120.990	126.141	132.309	136.619
98	116.315	122.108	127.282	133.476	137.803
99	117.407	123.225	128.422	134.642	138.987
100	118.498	124.342	129.561	135.807	140.169

Table 4: Critical Values for the F-Distribution at 5% significance level.
(continued on next page)

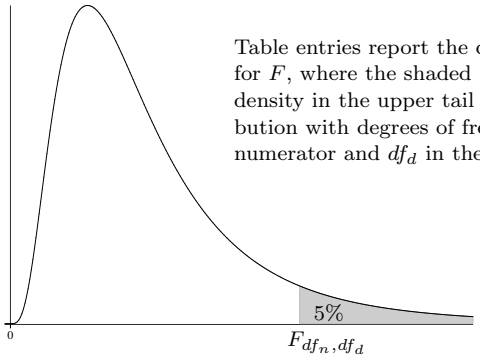

Table entries report the critical value for F, where the shaded area is the 5% density in the upper tail of the F-distribution with degrees of freedom df_n in the numerator and df_d in the denominator.

	df_n									
df_d	1	2	3	4	5	6	7	8	9	10
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16
31	4.16	3.30	2.91	2.68	2.52	2.41	2.32	2.25	2.20	2.15
32	4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14
33	4.14	3.28	2.89	2.66	2.50	2.39	2.30	2.23	2.18	2.13
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11
37	4.11	3.25	2.86	2.63	2.47	2.36	2.27	2.20	2.14	2.10
38	4.10	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09
39	4.09	3.24	2.85	2.61	2.46	2.34	2.26	2.19	2.13	2.08
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.03
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99
70	3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02	1.97
80	3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2.00	1.95
90	3.95	3.10	2.71	2.47	2.32	2.20	2.11	2.04	1.99	1.94
100	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97	1.93
200	3.89	3.04	2.65	2.42	2.26	2.14	2.06	1.98	1.93	1.88
500	3.86	3.01	2.62	2.39	2.23	2.12	2.03	1.96	1.90	1.85
1000	3.85	3.00	2.61	2.38	2.22	2.11	2.02	1.95	1.89	1.84
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88	1.83

Table 4: Critical Values for the F-Distribution at 5% significance level.
(continued from previous page)

df_n										
11	12	13	14	15	16	17	18	19	∞	df_d
242.98	243.91	244.69	245.36	245.95	246.46	246.92	247.32	247.69	254.32	1
19.40	19.41	19.42	19.42	19.43	19.43	19.44	19.44	19.44	19.50	2
8.76	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.67	8.53	3
5.94	5.91	5.89	5.87	5.86	5.84	5.83	5.82	5.81	5.63	4
4.70	4.68	4.66	4.64	4.62	4.60	4.59	4.58	4.57	4.37	5
4.03	4.00	3.98	3.96	3.94	3.92	3.91	3.90	3.88	3.67	6
3.60	3.57	3.55	3.53	3.51	3.49	3.48	3.47	3.46	3.23	7
3.31	3.28	3.26	3.24	3.22	3.20	3.19	3.17	3.16	2.93	8
3.10	3.07	3.05	3.03	3.01	2.99	2.97	2.96	2.95	2.71	9
2.94	2.91	2.89	2.86	2.85	2.83	2.81	2.80	2.79	2.54	10
2.82	2.79	2.76	2.74	2.72	2.70	2.69	2.67	2.66	2.40	11
2.72	2.69	2.66	2.64	2.62	2.60	2.58	2.57	2.56	2.30	12
2.63	2.60	2.58	2.55	2.53	2.51	2.50	2.48	2.47	2.21	13
2.57	2.53	2.51	2.48	2.46	2.44	2.43	2.41	2.40	2.13	14
2.51	2.48	2.45	2.42	2.40	2.38	2.37	2.35	2.34	2.07	15
2.46	2.42	2.40	2.37	2.35	2.33	2.32	2.30	2.29	2.01	16
2.41	2.38	2.35	2.33	2.31	2.29	2.27	2.26	2.24	1.96	17
2.37	2.34	2.31	2.29	2.27	2.25	2.23	2.22	2.20	1.92	18
2.34	2.31	2.28	2.26	2.23	2.21	2.20	2.18	2.17	1.88	19
2.31	2.28	2.25	2.22	2.20	2.18	2.17	2.15	2.14	1.84	20
2.28	2.25	2.22	2.20	2.18	2.16	2.14	2.12	2.11	1.81	21
2.26	2.23	2.20	2.17	2.15	2.13	2.11	2.10	2.08	1.78	22
2.24	2.20	2.18	2.15	2.13	2.11	2.09	2.08	2.06	1.76	23
2.22	2.18	2.15	2.13	2.11	2.09	2.07	2.05	2.04	1.73	24
2.20	2.16	2.14	2.11	2.09	2.07	2.05	2.04	2.02	1.71	25
2.18	2.15	2.12	2.09	2.07	2.05	2.03	2.02	2.00	1.69	26
2.17	2.13	2.10	2.08	2.06	2.04	2.02	2.00	1.99	1.67	27
2.15	2.12	2.09	2.06	2.04	2.02	2.00	1.99	1.97	1.65	28
2.14	2.10	2.08	2.05	2.03	2.01	1.99	1.97	1.96	1.64	29
2.13	2.09	2.06	2.04	2.01	1.99	1.98	1.96	1.95	1.62	30
2.11	2.08	2.05	2.03	2.00	1.98	1.96	1.95	1.93	1.61	31
2.10	2.07	2.04	2.01	1.99	1.97	1.95	1.94	1.92	1.59	32
2.09	2.06	2.03	2.00	1.98	1.96	1.94	1.93	1.91	1.58	33
2.08	2.05	2.02	1.99	1.97	1.95	1.93	1.92	1.90	1.57	34
2.07	2.04	2.01	1.99	1.96	1.94	1.92	1.91	1.89	1.56	35
2.07	2.03	2.00	1.98	1.95	1.93	1.92	1.90	1.88	1.55	36
2.06	2.02	2.00	1.97	1.95	1.93	1.91	1.89	1.88	1.54	37
2.05	2.02	1.99	1.96	1.94	1.92	1.90	1.88	1.87	1.53	38
2.04	2.01	1.98	1.95	1.93	1.91	1.89	1.88	1.86	1.52	39
2.04	2.00	1.97	1.95	1.92	1.90	1.89	1.87	1.85	1.51	40
1.99	1.95	1.92	1.89	1.87	1.85	1.83	1.81	1.80	1.44	50
1.95	1.92	1.89	1.86	1.84	1.82	1.80	1.78	1.76	1.39	60
1.93	1.89	1.86	1.84	1.81	1.79	1.77	1.75	1.74	1.35	70
1.91	1.88	1.84	1.82	1.79	1.77	1.75	1.73	1.72	1.32	80
1.90	1.86	1.83	1.80	1.78	1.76	1.74	1.72	1.70	1.30	90
1.89	1.85	1.82	1.79	1.77	1.75	1.73	1.71	1.69	1.28	100
1.84	1.80	1.77	1.74	1.72	1.69	1.67	1.66	1.64	1.19	200
1.81	1.77	1.74	1.71	1.69	1.66	1.64	1.62	1.61	1.11	500
1.80	1.76	1.73	1.70	1.68	1.65	1.63	1.61	1.60	1.08	1000
1.79	1.75	1.72	1.69	1.67	1.64	1.62	1.60	1.59	1.00	∞

Table 5: Critical Values for the Durbin-Watson Test at 5% significance level.

Table entries report the lower d_L and upper d_U critical values for the Durbin-Watson test at 5% significance level for sample size n where k' represents the number of explanatory variables excluding the regression constant.

	$k'=1$		$k'=2$		$k'=3$		$k'=4$		$k'=5$	
n	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U	d_L	d_U
15	1.08	1.36	0.95	1.54	0.82	1.75	0.69	1.97	0.56	2.21
16	1.10	1.37	0.98	1.54	0.86	1.73	0.74	1.93	0.62	2.15
17	1.13	1.38	1.02	1.54	0.90	1.71	0.78	1.90	0.67	2.10
18	1.16	1.39	1.05	1.53	0.93	1.69	0.82	1.87	0.71	2.06
19	1.18	1.40	1.08	1.53	0.97	1.68	0.86	1.85	0.75	2.02
20	1.20	1.41	1.10	1.54	1.00	1.68	0.90	1.83	0.79	1.99
21	1.22	1.42	1.13	1.54	1.03	1.67	0.93	1.81	0.83	1.96
22	1.24	1.43	1.15	1.54	1.05	1.66	0.96	1.80	0.86	1.94
23	1.26	1.44	1.17	1.54	1.08	1.66	0.99	1.79	0.90	1.92
24	1.27	1.45	1.19	1.55	1.10	1.66	1.01	1.78	0.93	1.90
25	1.29	1.45	1.21	1.55	1.12	1.66	1.04	1.77	0.95	1.89
26	1.30	1.46	1.22	1.55	1.14	1.65	1.06	1.76	0.98	1.88
27	1.32	1.47	1.24	1.56	1.16	1.65	1.08	1.76	1.01	1.86
28	1.33	1.48	1.26	1.56	1.18	1.65	1.10	1.75	1.03	1.85
29	1.34	1.48	1.27	1.56	1.20	1.65	1.12	1.74	1.05	1.84
30	1.35	1.49	1.28	1.57	1.21	1.65	1.14	1.74	1.07	1.83
31	1.36	1.50	1.30	1.57	1.23	1.65	1.16	1.74	1.09	1.83
32	1.37	1.50	1.31	1.57	1.24	1.65	1.18	1.73	1.11	1.82
33	1.38	1.51	1.32	1.58	1.26	1.65	1.19	1.73	1.13	1.81
34	1.39	1.51	1.33	1.58	1.27	1.65	1.21	1.73	1.15	1.81
35	1.40	1.52	1.34	1.58	1.28	1.65	1.22	1.73	1.16	1.80
36	1.41	1.52	1.35	1.59	1.29	1.65	1.24	1.73	1.18	1.80
37	1.42	1.53	1.36	1.59	1.31	1.66	1.25	1.72	1.19	1.80
38	1.43	1.54	1.37	1.59	1.32	1.66	1.26	1.72	1.21	1.79
39	1.43	1.54	1.38	1.60	1.33	1.66	1.27	1.72	1.22	1.79
40	1.44	1.54	1.39	1.60	1.34	1.66	1.29	1.72	1.23	1.79
45	1.48	1.57	1.43	1.62	1.38	1.67	1.34	1.72	1.29	1.78
50	1.50	1.59	1.46	1.63	1.42	1.67	1.38	1.72	1.34	1.77
55	1.53	1.60	1.49	1.64	1.45	1.68	1.41	1.72	1.38	1.77
60	1.55	1.62	1.51	1.65	1.48	1.69	1.44	1.73	1.41	1.77
65	1.57	1.63	1.54	1.66	1.50	1.70	1.47	1.73	1.44	1.77
70	1.58	1.64	1.55	1.67	1.52	1.70	1.49	1.74	1.46	1.77
75	1.60	1.65	1.57	1.68	1.54	1.71	1.51	1.74	1.49	1.77
80	1.61	1.66	1.59	1.69	1.56	1.72	1.53	1.74	1.51	1.77
85	1.62	1.67	1.60	1.70	1.57	1.72	1.55	1.75	1.52	1.77
90	1.63	1.68	1.61	1.70	1.59	1.73	1.57	1.75	1.54	1.78
95	1.64	1.69	1.62	1.71	1.60	1.73	1.58	1.75	1.56	1.78
100	1.65	1.69	1.63	1.72	1.61	1.74	1.59	1.76	1.57	1.78

Reprinted from J. Durbin and G.S Watson (1951) "Testing for serial correlation in least-squares regression II", *Biometrika*, 38, 159-177, Table 4.