

APPENDIX 1

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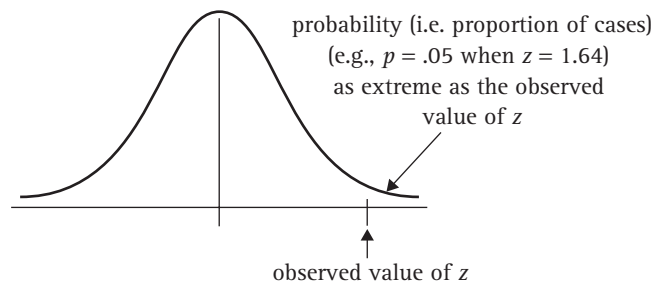
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Statistical Table 4.1 Probabilities associated with values as extreme as observed values of z in the normal distribution

z-value	2nd decimal place of observed z-value									
	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641
0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
3.2	0.0007									
3.3	0.0005									
3.4	0.0003									
3.5	0.00023									
3.6	0.00016									
3.7	0.00011									
3.8	0.00007									
3.9	0.00005									

Source: The entries in this table were computed by D.R. McDonald at the University of Dundee.



Statistical Table 7.1 Critical one- and two-tailed values of x for a Sign test, where x = the number of cases with the *less* frequent sign and N is the total number of positive and negative differences between pairs of scores, i.e., ties are not counted. (x is significant if it is less than or equal to the table value)

N	level of significance for a one-tailed test						
	.10	.05	.025	.01	.005	.001	.0005
	level of significance for a two-tailed test						
	.20	.10	.05	.02	.01	.002	.001
4	0						
5	0	0					
6	0	0	0				
7	1	0	0	0			
8	1	1	0	0	0		
9	2	1	1	0	0		
10	2	1	1	0	0	0	
11	2	2	1	1	0	0	0
12	3	2	2	1	1	0	0
13	3	3	2	1	1	0	0
14	4	3	2	2	1	1	0
15	4	3	3	2	2	1	1
16	4	4	3	2	2	1	1
17	5	4	4	3	2	1	1
18	5	5	4	3	3	2	1
19	6	5	4	4	3	2	2
20	6	5	5	4	3	2	2
21	7	6	5	4	4	3	2
22	7	6	5	5	4	3	3
23	7	7	6	5	4	3	3
24	8	7	6	5	5	4	3
25	8	7	7	6	5	4	4
26	9	8	7	6	6	4	4
27	9	8	7	7	6	5	4
28	10	9	8	7	6	5	5
29	10	9	8	7	7	5	5
30	10	10	9	8	7	6	5

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 7.2 Critical two-tailed (i.e., non-directional) values of Chi-Square (χ^2) (Chi-Square is significant if it is greater than or equal to the table value)

df^1	level of significance for a two-tailed test						
	0.20	0.10	0.05	0.02	0.01	0.002	0.0001
1 ²	1.64	2.71	3.84	5.41	6.64	9.55	10.83
2	3.22	4.61	5.99	7.82	9.21	12.43	13.82
3	4.64	6.25	7.82	9.84	11.35	14.80	16.27
4	5.99	7.78	9.49	11.67	13.28	16.92	18.47
5	7.29	9.24	11.07	13.39	15.09	18.91	20.52
6	8.56	10.65	12.59	15.03	16.81	20.79	22.46
7	9.80	12.02	14.07	16.62	18.48	22.60	24.32
8	11.03	13.36	15.51	18.17	20.09	24.35	26.12
9	12.24	14.68	16.92	19.68	21.67	26.06	27.88
10	13.44	15.99	18.31	21.16	23.21	27.72	29.59
12	15.81	18.55	21.03	24.05	26.22	30.96	32.91
14	18.15	21.06	23.69	26.87	29.14	34.09	36.12
16	20.47	23.54	26.30	29.63	32.00	37.15	39.25
18	22.76	25.99	28.87	32.35	34.81	40.14	42.31
20	25.04	28.41	31.41	35.02	37.57	43.07	45.32
25	30.68	34.38	37.65	41.57	44.31	50.22	52.62
30	36.25	40.26	43.77	47.96	50.89	57.17	59.70
35	41.78	46.06	49.80	54.24	57.34	63.96	66.62
40	47.27	51.81	55.76	60.44	63.69	70.62	73.40
45	52.73	57.51	61.66	66.56	69.96	77.18	80.08
50	58.16	63.17	67.51	72.61	76.15	83.66	86.66
55	63.58	68.80	73.31	78.62	82.29	90.06	93.17
60	68.97	74.40	79.08	84.58	88.38	96.40	99.61
65	74.35	79.97	84.82	90.50	94.42	102.69	105.99
70	79.72	85.53	90.53	96.39	100.43	108.93	112.32
80	90.41	96.58	101.88	108.07	112.33	121.28	124.84
100	111.67	118.50	124.34	131.14	135.81	145.58	149.45

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

¹ $df = (\text{rows} - 1) \times (\text{columns} - 1)$

² for a one-tailed test for 2×2 tables only (i.e., when $df = 1$), divide the probabilities at the top of the table by 2

Statistical Table 8.1 Critical one- and two-tailed values of T for a Wilcoxon Matched-Pairs Signed-Ranks test, where T = the sum of differences with the least frequent sign and N = the total number of differences with either a positive or negative sign. (T is significant if it is less than or equal to the table value)

N	level of significance for a one-tailed test					
	.10	.05	.025	.01	.005	.001
	level of significance for a two-tailed test					
	.20	.10	.05	.02	.01	.002
4	0					
5	2	0				
6	4	2	0			
7	6	3	2	0		
8	8	5	3	1	0	
9	11	8	5	3	1	
10	14	10	8	5	3	0
11	18	13	10	7	5	1
12	22	17	14	10	7	2
13	26	21	17	12	9	4
14	31	25	21	15	12	6
15	37	30	25	19	16	8
16	42	35	29	23	19	11
17	49	41	35	28	23	14
18	55	47	40	32	27	18
19	62	53	46	37	32	21
20	70	60	52	43	37	23
21	78	67	58	50	44	32
22	86	75	65	55	47	34
23	95	83	73	62	54	40
24	104	91	81	69	61	46
25	115	101	89	76	68	51
26	124	110	98	84	75	58
27	135	119	107	93	83	63
28	146	130	116	101	91	71
29	157	141	126	111	101	80
30	169	152	136	119	106	85
31	181	163	147	129	118	95
32	195	175	159	140	127	102
33	208	187	170	151	137	111
34	221	200	183	163	149	123
35	236	213	195	175	159	130
36	250	227	208	185	171	139
37	266	241	221	198	182	153
38	281	256	234	211	194	163
39	297	271	249	224	209	176
40	314	286	264	238	219	186

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.
 N = number of non-equal pairs of scores

Statistical Table 8.2(1) (one-tailed at .10; two-tailed at .20) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 ⇒ n_2 ↓	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3			0																
4			1	3															
5		1	2	4	5														
6	1	3	5	7	9														
7	1	4	6	9	11	13													
8	2	5	7	10	13	16	19												
9	2	5	8	12	15	18	21	25											
10	3	6	10	13	17	21	24	28	32										
11	3	7	11	15	19	23	27	31	36	40									
12	4	8	12	17	21	26	30	35	39	44	49								
13	4	9	14	18	23	28	33	38	43	48	53	58							
14	5	9	15	20	25	30	36	42	47	52	57	64	69						
15	5	10	16	22	27	33	39	45	51	57	63	68	74	81					
16	5	11	17	23	29	35	42	48	54	61	67	74	80	86	92				
17	5	12	18	25	32	38	45	52	58	65	72	79	85	92	99	105			
18	6	13	20	27	34	41	48	55	63	69	76	84	91	98	105	113	120		
19	6	14	21	28	36	43	50	59	65	74	81	89	96	104	112	120	128	120	
20	7	15	22	30	38	46	54	62	70	78	85	94	102	110	119	127	135	128	152

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 8.2(2) (one-tailed at .05; two-tailed at .1) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 ⇒ n_2 ⇓	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3		0																	
4		0	1																
5	0	1	2	4															
6	0	2	3	5	7														
7	0	2	4	6	8	11													
8	1	3	5	8	10	13	15												
9	1	4	6	9	12	15	18	21											
10	1	4	7	10	14	17	20	24	27										
11	1	5	8	12	16	19	23	27	31	34									
12	2	5	9	13	17	22	26	30	34	38	42								
13	2	6	11	15	19	24	28	33	38	42	47	51							
14	3	7	12	16	21	26	31	37	41	46	51	56	61						
15	3	7	13	18	23	28	33	39	44	50	55	60	66	72					
16	3	8	13	19	24	30	36	42	48	54	60	65	71	77	83				
17	3	9	15	20	26	32	39	45	51	57	64	70	76	83	89	95			
18	3	9	16	22	28	35	41	48	55	61	68	75	82	88	95	102	109		
19	4	10	17	23	30	37	44	51	58	65	72	79	87	94	101	109	116	123	
20	4	11	18	25	32	39	47	54	62	69	76	84	92	100	107	114	123	130	138

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 8.2(3) (one-tailed at .025; two-tailed at .05) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 ⇒ n_2 ↓	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3																			
4			0																
5	0	1	2																
6		1	2	3	5														
7		1	3	5	6	8													
8	0	2	3	6	8	10	13												
9	0	2	4	7	9	12	15	17											
10	0	3	5	8	11	14	17	20	23										
11	0	3	6	9	13	16	19	23	26	30									
12	1	3	7	11	14	18	22	26	29	33	37								
13	1	4	8	12	16	20	24	28	33	37	41	45							
14	1	5	9	13	17	22	26	31	36	40	45	50	54						
15	1	5	10	14	19	24	29	34	38	44	49	54	59	64					
16	1	6	11	16	21	26	31	36	42	48	53	59	64	69	74				
17	2	6	12	17	22	28	34	39	45	51	57	63	69	75	80	86			
18	2	6	13	18	24	30	36	42	49	55	61	67	73	80	86	93	99		
19	2	7	13	19	26	31	39	45	52	58	65	72	78	85	92	99	106	112	
20	2	8	14	20	27	34	41	48	55	62	68	76	83	90	98	104	112	119	127

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 8.2(4) (one-tailed at .01; two-tailed at .02) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 ⇒ n_2 ⇓	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
3																							
4																							
5				0	1																		
6					1	2	3																
7					0	1	3	4	6														
8					0	2	4	6	8	10													
9					1	3	5	7	9	11	14												
10					1	3	6	8	11	13	16	19											
11					1	4	7	10	13	15	18	22	25										
12					2	5	8	11	14	18	21	24	28	31									
13					0	2	5	8	12	15	20	23	27	31	35	38							
14					0	2	6	10	13	18	22	26	30	34	38	43	47						
15					0	3	7	11	15	19	24	28	32	38	42	46	52	57					
16					0	3	7	12	16	21	26	30	36	40	46	50	56	61	65				
17					0	4	8	12	17	23	28	33	39	44	49	54	60	66	71	76			
18					1	4	9	14	19	24	30	35	41	47	53	59	65	71	76	82	88		
19					1	4	9	15	20	26	33	38	44	50	56	62	69	75	82	88	94	101	
20					1	5	11	16	22	28	35	40	47	53	60	67	73	80	87	93	100	107	115

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 8.2(5) (one-tailed at .005; two-tailed at .01) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 \Rightarrow $n_2 \Downarrow$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3																			
4																			
5				0															
6			0	1	1														
7			0	1	3	4													
8			1	2	4	6	8												
9		0	1	3	5	7	9	11											
10		0	2	4	6	9	11	13	16										
11		0	2	5	7	10	13	16	18	21									
12		1	3	6	9	12	15	18	21	24	28								
13		1	3	7	10	13	17	20	23	27	31	34							
14		1	4	8	11	15	19	23	26	30	34	39	41						
15		1	5	8	12	16	20	24	28	33	37	41	47	52					
16		2	5	10	13	17	23	26	32	36	42	45	51	55	59				
17		2	6	10	14	19	24	29	35	39	44	49	54	59	64	70			
18		2	6	11	16	20	25	31	37	43	47	52	59	63	70	75	81		
19	0	3	7	12	17	22	28	34	39	45	51	57	63	69	75	81	87	93	
20	0	3	8	13	18	24	31	36	42	48	54	61	67	74	78	85	92	95	106

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 8.2(6) (one-tailed at .001; two-tailed at .002) Critical one- and two-tailed values of U for a Mann-Whitney Independent Groups test, where U = the smaller of the two possible values and n_1 and n_2 = the numbers of participants in the two groups. (U is significant if it is less than or equal to the table value)

n_1 ⇒ n_2 ⇓	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
3																				
4																				
5																				
6																				
7						0	1													
8					0	1	3	4												
9					1	2	3	5	7											
10				0	1	3	4	6	8	10										
11			0	2	3	6	7	9	12	14										
12			0	2	3	6	9	12	14	17	20									
13			1	2	4	7	11	12	17	20	23	26								
14			1	4	6	9	12	15	19	22	25	31	32							
15			2	4	7	10	14	17	22	24	28	31	36	40						
16			2	5	8	11	15	19	23	27	31	35	39	43	48					
17			0	2	5	7	12	17	22	25	29	34	37	43	47	52	57			
18			0	3	6	10	14	17	23	25	33	36	41	45	52	56	61	66		
19			0	3	7	12	15	20	26	29	34	39	44	52	55	62	67	72	76	
20			0	3	7	12	17	21	25	32	36	41	48	54	59	66	69	75	78	87

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.

Statistical Table 9.1 Critical values of t (t is significant when it equals or exceeds the table value)

df	level of significance for a one-tailed test						
	.10	.05	.025	.01	.005	.001	.0005
	level of significance for a two-tailed test						
	.20	.10	.05	.02	.01	.002	.001
1	3.08	6.31	12.71	31.82	63.66	318.31	636.62
2	1.89	2.92	4.30	6.96	9.92	22.33	31.60
3	1.64	2.35	3.18	4.54	5.84	10.22	12.92
4	1.53	2.13	2.78	3.75	4.60	7.17	8.61
5	1.48	2.02	2.57	3.36	4.03	5.89	6.87
6	1.44	1.94	2.45	3.14	3.71	5.21	5.96
7	1.41	1.89	2.36	3.00	3.50	4.79	5.41
8	1.40	1.86	2.31	2.90	3.36	4.50	5.04
9	1.38	1.83	2.26	2.82	3.25	4.30	4.78
10	1.37	1.81	2.23	2.76	3.17	4.14	4.59
11	1.36	1.80	2.20	2.72	3.11	4.03	4.44
12	1.36	1.78	2.18	2.68	3.05	3.93	4.32
13	1.35	1.77	2.16	2.65	3.01	3.85	4.22
14	1.35	1.76	2.14	2.62	2.98	3.79	4.14
15	1.34	1.75	2.13	2.60	2.95	3.73	4.07
16	1.34	1.75	2.12	2.58	2.92	3.69	4.02
17	1.33	1.74	2.11	2.57	2.90	3.65	3.97
18	1.33	1.73	2.10	2.55	2.88	3.61	3.92
19	1.33	1.73	2.09	2.54	2.86	3.58	3.88
20	1.33	1.72	2.09	2.53	2.85	3.55	3.85
21	1.32	1.72	2.08	2.52	2.83	3.53	3.82
22	1.32	1.72	2.07	2.51	2.82	3.51	3.79
23	1.32	1.71	2.07	2.50	2.81	3.49	3.77
24	1.32	1.71	2.06	2.49	2.80	3.47	3.75
25	1.32	1.71	2.06	2.49	2.79	3.45	3.73
26	1.31	1.71	2.06	2.48	2.78	3.44	3.71
27	1.31	1.70	2.05	2.47	2.77	3.42	3.69
28	1.31	1.70	2.05	2.47	2.76	3.41	3.67
29	1.31	1.70	2.05	2.46	2.76	3.40	3.66
30	1.31	1.70	2.04	2.46	2.75	3.39	3.65
40	1.30	1.68	2.02	2.42	2.70	3.31	3.55
60	1.30	1.67	2.00	2.39	2.66	3.23	3.46
120	1.29	1.66	1.98	2.36	2.62	3.16	3.37
2000	1.28	1.65	1.96	2.33	2.58	3.09	3.30

Source: The entries in this table were computed by Pat Dugard, a freelance statistician. For an independent groups (between Ss) test, $df = N - 2$ (where N is the total number of scores in both groups) For a related (within Ss or matched pairs) test, $df = N - 1$ (where N is the number of pairs of scores)

Statistical Table 10.1 Pearson’s product–moment correlation coefficient: Critical values of *r* for one- and two-tailed tests (*r* is significant if it equals or exceeds the table value)

df (N-2)	level of significance for a one-tailed test						
	.10	.05	.025	.01	.005	.001	.0005
	level of significance for a two-tailed test						
	.20	.10	.05	.02	.01	.002	.001
1	0.9511	0.9877	0.9969	0.9995	0.9999	1.0000	1.0000
2	0.8000	0.9000	0.9500	0.9800	0.9900	0.9980	0.9990
3	0.6870	0.8054	0.8783	0.9343	0.9587	0.9859	0.9911
4	0.6084	0.7293	0.8114	0.8822	0.9172	0.9633	0.9741
5	0.5509	0.6694	0.7545	0.8329	0.8745	0.9350	0.9509
6	0.5067	0.6215	0.7067	0.7887	0.8343	0.9049	0.9249
7	0.4716	0.5822	0.6664	0.7498	0.7977	0.8751	0.8983
8	0.4428	0.5494	0.6319	0.7155	0.7646	0.8467	0.8721
9	0.4187	0.5214	0.6021	0.6851	0.7348	0.8199	0.8470
10	0.3981	0.4973	0.5760	0.6581	0.7079	0.7950	0.8233
11	0.3802	0.4762	0.5529	0.6339	0.6835	0.7717	0.8010
12	0.3646	0.4575	0.5324	0.6120	0.6614	0.7501	0.7800
13	0.3507	0.4409	0.5140	0.5923	0.6411	0.7301	0.7604
14	0.3383	0.4259	0.4973	0.5742	0.6226	0.7114	0.7419
15	0.3271	0.4124	0.4821	0.5577	0.6055	0.6940	0.7247
16	0.3170	0.4000	0.4683	0.5425	0.5897	0.6777	0.7084
17	0.3077	0.3887	0.4555	0.5285	0.5751	0.6624	0.6932
18	0.2992	0.3783	0.4438	0.5155	0.5614	0.6481	0.6788
19	0.2914	0.3687	0.4329	0.5034	0.5487	0.6346	0.6652
20	0.2841	0.3598	0.4227	0.4921	0.5368	0.6219	0.6524
25	0.2546	0.3233	0.3809	0.4451	0.4869	0.5679	0.5974
30	0.2327	0.2960	0.3494	0.4093	0.4487	0.5257	0.5541
35	0.2156	0.2746	0.3246	0.3810	0.4182	0.4916	0.5189
40	0.2018	0.2573	0.3044	0.3578	0.3932	0.4633	0.4896
45	0.1903	0.2429	0.2876	0.3384	0.3721	0.4394	0.4647
50	0.1806	0.2306	0.2732	0.3218	0.3542	0.4188	0.4432
60	0.1650	0.2108	0.2500	0.2948	0.3248	0.3850	0.4079
70	0.1528	0.1954	0.2319	0.2737	0.3017	0.3583	0.3798
80	0.1430	0.1829	0.2172	0.2565	0.2830	0.3364	0.3568
90	0.1348	0.1726	0.2050	0.2422	0.2673	0.3181	0.3375
100	0.1279	0.1638	0.1946	0.2301	0.2540	0.3025	0.3211

Source: The entries in this table were computed by D.R. McDonald at the University of Dundee.

Statistical Table 10.2 Spearman's rank-order correlation coefficient (r_s): Critical values of r_s for one- and two-tailed tests (r_s is significant if it equals or exceeds the table value)

N (num of pairs)	level of significance for a one-tailed test					
	.10	.05	.025	.01	.005	.001
	level of significance for a two-tailed test					
	.20	.10	.05	.02	.01	.002
4	1.0000	1.0000				
5	0.8000	0.9000	1.0000	1.0000		
6	0.6571	0.8286	0.8857	0.9429	1.0000	
7	0.6071	0.7143	0.7857	0.8929	0.9286	1.0000
8	0.5238	0.6429	0.7381	0.8333	0.8810	0.9524
9	0.4833	0.6000	0.6833	0.7667	0.8167	0.9167
10	0.4546	0.5636	0.6485	0.7455	0.7939	0.8788
11	0.4182	0.5273	0.6182	0.7091	0.7546	0.8364
12	0.3986	0.5035	0.5874	0.6713	0.7273	0.8252
13	0.3791	0.4780	0.5604	0.6484	0.7033	0.7967
14	0.3670	0.4637	0.5429	0.6308	0.6791	0.7670
15	0.3500	0.4429	0.5179	0.6036	0.6536	0.7464
16	0.3412	0.4265	0.5000	0.5765	0.6206	0.7294
17	0.3284	0.4167	0.4853	0.5662	0.6177	0.7132
18	0.3189	0.4014	0.4758	0.5542	0.6037	0.6925
19	0.3088	0.3912	0.4579	0.5351	0.5842	0.6737
20	0.2993	0.3805	0.4466	0.5203	0.5684	0.6602

Source: The entries in this table were computed by Pat Dugard, a freelance statistician.