Table 16 Critical values of D for the Kolmogorov–Smirnov one-sample test

D = maximum values of the differences.

n	Level of significance α				
	0.20	0.15	0.10	0.05	0.01
1	0.900	0.925	0.950	0.975	0.995
2	0.684	0.726	0.776	0.842	0.929
3	0.565	0.597	0.642	0.708	0.823
4	0.494	0.525	0.564	0.624	0.733
5	0.446	0.474	0.510	0.565	0.669
6	0.410	0.436	0.470	0.521	0.618
7	0.381	0.405	0.438	0.486	0.577
8	0.358	0.381	0.411	0.457	0.543
9	0.339	0.360	0.388	0.432	0.514
10	0.322	0.342	0.368	0.410	0.490
11	0.307	0.326	0.352	0.391	0.468
12	0.295	0.313	0.338	0.375	0.450
13	0.284	0.302	0.325	0.361	0.433
14	0.274	0.292	0.314	0.349	0.418
15	0.266	0.283	0.304	0.338	0.404
16	0.258	0.274	0.295	0.328	0.392
17	0.250	0.266	0.286	0.318	0.381
18	0.244	0.259	0.278	0.309	0.371
19	0.237	0.252	0.272	0.301	0.363
20	0.231	0.246	0.264	0.294	0.356
25	0.21	0.22	0.24	0.27	0.32
30	0.19	0.20	0.22	0.24	0.29
35	0.18	0.19	0.21	0.23	0.27
Over 35	$\frac{1.07}{\sqrt{n}}$	$\frac{1.14}{\sqrt{n}}$	$\frac{1.22}{\sqrt{n}}$	$\frac{1.36}{\sqrt{n}}$	$\frac{1.63}{\sqrt{n}}$

Source: Massey, 1951

Table 21 Critical values of the smallest rank sum Wilcoxon–Mann–Whitney test

n_1 — number of elements in the largest sample,
n_2 — number of elements in the smallest sample.

		Level of significance α			
Two-sided		0.20	0.10	0.05	0.01
One-sided		0.10	0.05	0.025	0.005
n_1	n_2				
1	1				
2	1				
2	2	5			
3	1				
3	2	7	6		
3	3	13	11	10	
4	1				
4	2	7	6		
4	3	13	11	10	
4	4	20	18	16	15
5	1				
5	2	4	3	–	–
5	3	8	7	6	–
5	4	14	12	11	–
5	5	20	19	17	15
6	1				
6	2	4	3	–	–
6	3	9	8	7	–
6	4	15	13	12	10
6	5	22	20	18	16
6	6	30	28	26	13
7	1				
7	2	4	3	–	–
7	3	10	8	7	–
7	4	16	14	13	10
7	5	23	21	20	16
7	6	32	29	27	24
7	7	41	39	36	32
8	1				
8	2	5	4	3	–
8	3	11	9	8	–
8	4	17	15	14	11
8	5	25	23	21	17
8	6	34	31	29	25
8	7	44	41	38	34
8	8	55	51	49	43
9	1	1			
9	2	5	4	3	–
9	3	11	9	8	6
9	4	19	16	14	11
9	5	27	24	22	18
9	6	36	33	31	26
9	7	46	43	40	35
9	8	58	54	51	45
9	9	70	66	62	56
10	1	1			
10	2	6	4	3	–
10	3	12	10	9	6
10	4	20	17	15	12
10	5	28	26	23	19

		Level of significance α		
Two-sided		0.20	0.10	0.05
One-sided		0.10	0.05	0.025
n_1	n_2			
10	6	38	35	32
10	7	49	45	42
10	8	60	56	53
10	9	73	69	65
10	10	87	82	78
11	1	1	–	–
11	2	6	4	3
11	3	13	11	9
11	4	21	18	16
11	5	30	27	24
11	6	40	37	34
11	7	51	47	44
11	8	63	59	55
11	9	76	72	68
11	10	91	86	81
11	11	106	100	96
12	1	1	–	–
12	2	7	5	4
12	3	14	11	10
12	4	22	19	17
12	5	32	28	26
12	6	42	38	35
12	7	54	49	46
12	8	66	62	58
12	9	80	75	71
12	10	94	89	84
12	11	110	104	99
12	12	127	120	115
13	1	–	–	–
13	2	7	5	4
13	3	15	12	10
13	4	23	20	18
13	5	33	30	27
13	6	44	40	37
13	7	56	52	48
13	8	69	64	60
13	9	83	78	73
13	10	98	92	88
13	11	114	108	103
13	12	131	125	119
13	13	149	142	136

Table 21 continued

Level of significance α						Level of significance α					
Two-sided		0.20	0.10	0.05	0.01	Two-sided		0.20	0.10	0.05	0.01
One-sided		0.10	0.05	0.025	0.005	One-sided		0.10	0.05	0.025	0.005
n_1	n_2					n_1	n_2				
14	1	1	–	–	–	17	4	28	25	21	16
14	2	7	5	4	–	17	5	40	35	32	25
14	3	16	13	11	7	17	6	52	47	43	36
14	4	25	21	19	14	17	7	66	61	56	47
14	5	35	31	28	22	17	8	81	75	70	60
14	6	46	42	38	32	17	9	97	90	84	74
14	7	59	54	50	43	17	10	113	106	100	89
14	8	72	67	62	54	17	11	131	123	117	105
14	9	86	81	76	67	17	12	150	142	135	122
14	10	102	96	91	81	17	13	170	161	154	140
14	11	118	112	106	96	17	14	190	182	174	159
14	12	136	129	123	112	17	15	212	203	195	180
14	13	154	147	141	129	17	16	235	225	217	201
14	14	174	166	160	147	17	17	259	249	240	223
15	1	1	–	–	–	18	1	1	–	–	–
15	2	8	6	4	–	18	2	9	7	5	–
15	3	16	13	11	8	18	3	19	15	13	8
15	4	26	22	20	15	18	4	30	26	22	16
15	5	37	33	29	23	18	5	42	37	33	26
15	6	48	44	40	33	18	6	55	49	45	37
15	7	61	56	52	44	18	7	69	63	58	49
15	8	75	69	65	56	18	8	84	77	72	62
15	9	90	84	79	69	18	9	100	93	87	76
15	10	106	99	94	84	18	10	117	110	103	92
15	11	123	116	110	99	18	11	135	127	121	108
15	12	141	133	127	115	18	12	155	146	139	125
15	13	159	152	145	133	18	13	175	166	158	144
15	14	179	171	164	151	18	14	196	187	179	163
15	15	200	192	184	171	18	15	218	208	200	184
16	1	1	–	–	–	18	16	242	231	222	206
16	2	8	6	4	–	18	17	266	255	246	228
16	3	17	14	12	8	18	18	291	280	270	252
16	4	27	24	21	15	19	1	2	1	–	–
16	5	38	34	30	24	19	2	10	7	5	3
16	6	50	46	42	34	19	3	20	16	13	9
16	7	64	58	54	46	19	4	31	27	23	17
16	8	78	72	67	58	19	5	43	38	34	27
16	9	93	87	82	72	19	6	57	51	46	38
16	10	109	103	97	86	19	7	71	65	60	50
16	11	127	120	113	102	19	8	87	80	74	64
16	12	145	138	131	119	19	9	103	96	90	78
16	13	165	156	150	130	19	10	121	113	107	94
16	14	185	176	169	155	19	11	139	131	124	111
16	15	206	197	190	175	19	12	159	150	143	129
16	16	229	219	211	196	19	13	180	171	163	147
17	1	1	–	–	–	19	14	202	192	182	168
17	2	9	6	5	–	19	15	224	214	205	189
17	3	18	15	12	8	19	16	248	237	228	210