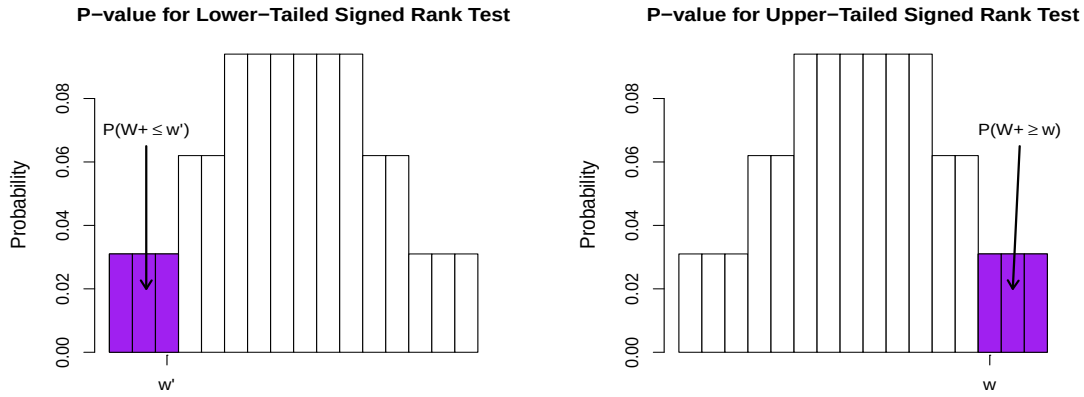
Tail Probabilities (P-Values) for the Signed Rank Test Statistic W^+



Below, p is the lower-tail probability $P(W^+ \leq w')$ and also the upper-tail probability $P(W^+ \geq w)$. For a two-tailed test, multiply the smaller of the lower and upper tail probabilities by two.

$n = 3$			$n = 4$			$n = 5$			$n = 6$			$n = 7$			$n = 8$			$n = 9$		
w'	p	w	w'	p	w	w'	p	w	w'	p	w	w'	p	w	w'	p	w	w'	p	w
3	.625	3	5	.562	5	7	.500	8	10	.500	11	14	.531	14	18	.527	18	22	.500	23
2	.375	4	4	.438	6	6	.406	9	9	.422	12	13	.469	15	17	.473	19	21	.455	24
1	.250	5	3	.312	7	5	.312	10	8	.344	13	12	.406	16	16	.422	20	20	.410	25
0	.125	6	2	.188	8	4	.219	11	7	.281	14	11	.344	17	15	.371	21	19	.367	26
			1	.125	9	3	.156	12	6	.219	15	10	.289	18	14	.320	22	18	.326	27
			0	.062	10	2	.094	13	5	.156	16	9	.234	19	13	.273	23	17	.285	28
						1	.062	14	4	.109	17	8	.188	20	12	.230	24	16	.248	29
						0	.031	15	3	.078	18	7	.148	21	11	.191	25	15	.213	30
									2	.047	19	6	.109	22	10	.156	26	14	.180	31
									1	.031	20	5	.078	23	9	.125	27	13	.150	32
									0	.016	21	4	.055	24	8	.098	28	12	.125	33
												3	.039	25	7	.074	29	11	.102	34
												2	.023	26	6	.055	30	10	.082	35
												1	.016	27	5	.039	31	9	.064	36
												0	.008	28	4	.027	32	8	.049	37
															3	.020	33	7	.037	38
															2	.012	34	6	.027	39
															1	.008	35	5	.020	40
															0	.004	36	4	.014	41
																		3	.010	42
																		2	.006	43
																		1	.004	44
																		0	.002	45

Continued

$\boldsymbol{n} = 10$

w'	p	w
27	.500	28
26	.461	29
25	.423	30
24	.385	31
23	.348	32
22	.312	33
21	.278	34
20	.246	35
19	.216	36
18	.188	37
17	.161	38
16	.138	39
15	.116	40
14	.097	41
13	.080	42
12	.065	43
11	.053	44
10	.042	45
9	.032	46
8	.024	47
7	.019	48
6	.014	49
5	.010	50
4	.007	51
3	.005	52
2	.003	53
1	.002	54
0	.001	55

$\boldsymbol{n} = 11$

w'	p	w
33	.517	33
32	.483	34
31	.449	35
30	.416	36
29	.382	37
28	.350	38
27	.319	39
26	.289	40
25	.260	41
24	.232	42
23	.207	43
22	.183	44
21	.160	45
20	.139	46
19	.120	47
18	.103	48
17	.087	49
16	.074	50
15	.062	51
14	.051	52
13	.042	53
12	.034	54
11	.027	55
10	.021	56
9	.016	57
8	.012	58
7	.009	59
6	.007	60
5	.005	61
4	.003	62
3	.002	63
2	.001	64
1	.001	65
0	.000	66

$\boldsymbol{n} = 12$

w'	p	w
39	.515	39
38	.485	40
37	.455	41
36	.425	42
35	.396	43
34	.367	44
33	.339	45
32	.311	46
31	.285	47
30	.259	48
29	.235	49
28	.212	50
27	.190	51
26	.170	52
25	.151	53
24	.133	54
23	.117	55
22	.102	56
21	.088	57
20	.076	58
19	.065	59
18	.055	60
17	.046	61
16	.039	62
15	.032	63
14	.026	64
13	.021	65
12	.017	66
11	.013	67
10	.010	68
9	.008	69
8	.006	70
7	.005	71
6	.003	72
5	.002	73
4	.002	74
3	.001	75
2	.001	76
1	.000	77
0	.000	78

$\boldsymbol{n} = 13$

w'	p	w
45	.500	46
44	.473	47
43	.446	48
42	.420	49
41	.393	50
40	.368	51
39	.342	52
38	.318	53
37	.294	54
36	.271	55
35	.249	56
34	.227	57
33	.207	58
32	.188	59
31	.170	60
30	.153	61
29	.137	62
28	.122	63
27	.108	64
26	.095	65
25	.084	66
24	.073	67
23	.064	68
22	.055	69
21	.047	70
20	.040	71
19	.034	72
18	.029	73
17	.024	74
16	.020	75
15	.016	76
14	.013	77
13	.011	78
12	.009	79
11	.007	80
10	.005	81
9	.004	82
8	.003	83
7	.002	84
6	.002	85
5	.001	86
4	.001	87
3	.001	88
2	.000	89
1	.000	90
0	.000	91

$\boldsymbol{n} = 14$

w'	p	w
52	.500	53
51	.476	54
50	.452	55
49	.428	56
48	.404	57
47	.380	58
46	.357	59
45	.335	60
44	.313	61
43	.292	62
42	.271	63
41	.251	64
40	.232	65
39	.213	66
38	.195	67
37	.179	68
36	.163	69
35	.148	70
34	.134	71
33	.121	72
32	.108	73
31	.097	74
30	.086	75
29	.077	76
28	.068	77
27	.059	78
26	.052	79
25	.045	80
24	.039	81
23	.034	82
22	.029	83
21	.025	84
20	.021	85
19	.018	86
18	.015	87
17	.012	88
16	.010	89
15	.008	90
14	.007	91
13	.005	92
12	.004	93
11	.003	94
10	.003	95
9	.002	96
8	.002	97
7	.001	98
6	.001	99
5	.001	100
4	.000	101
3	.000	102
2	.000	103
1	.000	104
0	.000	105

$\boldsymbol{n} = 15$

w'	p	w
60	.511	60
59	.489	61
58	.467	62
57	.445	63
56	.423	64
55	.402	65
54	.381	66
53	.360	67
52	.339	68
51	.319	69
50	.300	70
49	.281	71
48	.262	72
47	.244	73
46	.227	74
45	.211	75
44	.195	76
43	.180	77
42	.165	78
41	.151	79
40	.138	80
39	.126	81
38	.115	82
37	.104	83
36	.094	84
35	.084	85
34	.076	86
33	.068	87
32	.060	88
31	.053	89
30	.047	90
29	.042	91
28	.036	92
27	.032	93
26	.028	94
25	.024	95
24	.021	96
23	.018	97
22	.015	98
21	.013	99
20	.011	100
19	.009	101
18	.008	102
17	.006	103
16	.005	104
15	.004	105
14	.003	106
13	.003	107
12	.002	108
11	.002	109
10	.001	110
9	.001	111
8	.001	112
7	.001	113
6	.000	114
5	.000	115
4	.000	116
3	.000	117
2	.000	118
1	.000	119
0	.000	120

$\boldsymbol{n} = 16$

w'	p	w
68	.510	68
67	.490	69
66	.470	70
65	.450	71
64	.430	72
63	.410	73
62	.391	74
61	.372	75
60	.353	76
59	.334	77
58	.316	78
57	.298	79
56	.281	80
55	.264	81
54	.248	82
53	.232	83
52	.217	84
51	.202	85
50	.188	86
49	.174	87
48	.161	88
47	.149	89
46	.137	90
45	.126	91
44	.116	92
43	.106	93
42	.096	94
41	.088	95
40	.080	96
39	.072	97
38	.065	98
37	.058	99
36	.052	100
35	.047	101
34	.042	102
33	.037	103
32	.033	104
31	.029	105
30	.025	106
29	.022	107
28	.019	108
27	.017	109
26	.014	110
25	.012	111
24	.011	112
23	.009	113
22	.008	114
21	.007	115
20	.005	116
19	.005	117
18	.004	118
17	.003	119
16	.003	120
15	.002	121
14	.002	122
13	.001	123
12	.001	124
11	.001	125
10	.001	126
9	.001	127
8	.000	128
7	.000	129
6	.000	130
5	.000	131
4	.000	132
3	.000	133
2	.000	134
1	.000	135
0	.000	136