Wilcoxon Rank Sum Test: Independent Samples.

Critical Values T_L and T_U

Test statistic is the rank sum associated with the **smaller sample** (if equal sample sizes, either rank sum can be used)

$\alpha = .025$ one-tailed, $\alpha = .05$ two-tailed.

	n_1															
	3		**4**		**5**		**6**		**7**		**8**		**9**		**10**	
n_2	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U
3	5	16	6	18	6	21	7	23	7	26	8	28	8	31	9	33
4	6	18	11	25	12	28	12	32	13	35	14	38	15	41	16	44
5	6	21	12	28	18	37	19	41	20	45	21	49	22	53	24	56
6	7	23	12	32	19	41	26	52	28	56	29	61	31	65	32	70
7	7	26	13	35	20	45	28	56	37	68	39	73	41	78	43	83
8	8	28	14	38	21	49	29	61	39	73	49	87	51	93	54	98
9	8	31	15	41	22	53	31	65	41	78	51	93	63	108	66	114
10	9	33	16	44	24	56	32	70	43	83	54	98	66	114	79	131

$\alpha = .05$ one-tailed, $\alpha = .10$ two-tailed.

	n_1															
	3		**4**		**5**		**6**		**7**		**8**		**9**		**10**	
n_2	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U	T_L	T_U
3	6	15	7	17	7	20	8	22	9	24	9	27	10	29	11	31
4	7	17	12	24	13	27	14	30	15	33	16	36	17	39	18	42
5	7	20	13	27	19	36	20	40	22	43	24	46	25	50	26	54
6	8	22	14	30	20	40	28	50	30	54	32	58	33	63	35	67
7	9	24	15	33	22	43	30	54	39	66	41	71	43	76	46	80
8	9	27	16	36	24	46	32	58	41	71	52	84	54	90	57	95
9	10	29	17	39	25	50	33	63	43	76	54	90	66	105	69	111
10	11	31	18	42	26	54	35	67	46	80	57	95	69	111	83	127

Wilcoxon Matched-Pairs Signed Rank Test.

Critical Values T_0

One Tailed	Two Tailed	$n = 5$	$n = 6$	$n = 7$	$n = 8$	$n = 9$	$n = 10$
$\alpha = 0.05$	$\alpha = 0.10$	1	2	4	6	8	11
$\alpha = 0.025$	$\alpha = 0.05$		1	2	4	6	8
$\alpha = 0.010$	$\alpha = 0.020$			0	2	3	5
$\alpha = 0.005$	$\alpha = 0.010$				0	2	3
		$n = 11$	$n = 12$	$n = 13$	$n = 14$	$n = 15$	$n = 16$
$\alpha = 0.05$	$\alpha = 0.10$	14	17	21	26	30	36
$\alpha = 0.025$	$\alpha = 0.05$	11	14	17	21	25	30
$\alpha = 0.010$	$\alpha = 0.020$	7	10	13	16	20	24
$\alpha = 0.005$	$\alpha = 0.010$	5	7	10	13	16	19
		$n = 17$	$n = 18$	$n = 19$	$n = 20$	$n = 21$	$n = 22$
$\alpha = 0.05$	$\alpha = 0.10$	41	47	54	60	68	75
$\alpha = 0.025$	$\alpha = 0.05$	35	40	46	52	59	66
$\alpha = 0.010$	$\alpha = 0.020$	28	33	38	43	49	56
$\alpha = 0.005$	$\alpha = 0.010$	23	28	32	37	43	49
		$n = 23$	$n = 24$	$n = 25$	$n = 26$	$n = 27$	$n = 28$
$\alpha = 0.05$	$\alpha = 0.10$	83	92	101	110	120	130
$\alpha = 0.025$	$\alpha = 0.05$	73	81	90	98	107	117
$\alpha = 0.010$	$\alpha = 0.020$	62	69	77	85	93	102
$\alpha = 0.005$	$\alpha = 0.010$	55	61	68	76	84	92
		$n = 29$	$n = 30$	$n = 31$	$n = 32$	$n = 33$	$n = 34$
$\alpha = 0.05$	$\alpha = 0.10$	141	152	163	175	188	201
$\alpha = 0.025$	$\alpha = 0.05$	127	137	148	159	171	183
$\alpha = 0.010$	$\alpha = 0.020$	111	120	130	141	151	162
$\alpha = 0.005$	$\alpha = 0.010$	100	109	118	128	138	149
		$n = 35$	$n = 36$	$n = 37$	$n = 38$	$n = 39$	$n = 40$
$\alpha = 0.05$	$\alpha = 0.10$	214	228	242	256	271	287
$\alpha = 0.025$	$\alpha = 0.05$	195	208	222	235	250	264
$\alpha = 0.010$	$\alpha = 0.020$	174	186	198	211	224	238
$\alpha = 0.005$	$\alpha = 0.010$	160	171	183	195	208	221
		$n = 41$	$n = 42$	$n = 43$	$n = 44$	$n = 45$	$n = 46$
$\alpha = 0.05$	$\alpha = 0.10$	303	319	336	353	371	389
$\alpha = 0.025$	$\alpha = 0.05$	279	295	311	327	344	361
$\alpha = 0.010$	$\alpha = 0.020$	252	267	281	297	313	329
$\alpha = 0.005$	$\alpha = 0.010$	234	248	262	277	292	307
		$n = 47$	$n = 48$	$n = 49$	$n = 50$		
$\alpha = 0.05$	$\alpha = 0.10$	408	427	446	466		
$\alpha = 0.025$	$\alpha = 0.05$	379	397	415	434		
$\alpha = 0.010$	$\alpha = 0.020$	345	362	380	398		
$\alpha = 0.005$	$\alpha = 0.010$	323	339	356	373		