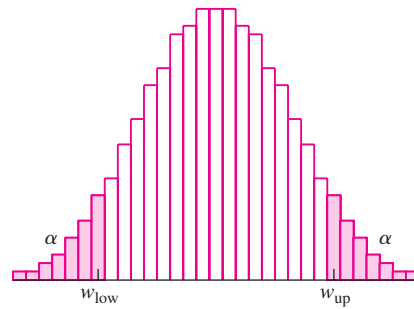


**TABLE A.6** Critical points for the Wilcoxon rank-sum test



$m$	$n$	$w_{\text{low}}$	$w_{\text{up}}$	$\alpha$	$m$	$n$	$w_{\text{low}}$	$w_{\text{up}}$	$\alpha$	$m$	$n$	$w_{\text{low}}$	$w_{\text{up}}$	$\alpha$	$m$	$n$	$w_{\text{low}}$	$w_{\text{up}}$	$\alpha$		
2	5	4	12	0.0952			11	29	0.0159			7	22	43	0.0530			30	60	0.0296	
		3	13	0.0476			10	30	0.0079				21	44	0.0366			29	61	0.0213	
	6	4	14	0.0714		6	14	30	0.0571				20	45	0.0240			28	62	0.0147	
		3	15	0.0357			13	31	0.0333				19	46	0.0152			27	63	0.0100	
	7	4	16	0.0556			12	32	0.0190				18	47	0.0088			26	64	0.0063	
		3	17	0.0278			11	33	0.0095				17	48	0.0051			25	65	0.0040	
	8	5	17	0.0889			10	34	0.0048				16	49	0.0025						
		4	18	0.0444		7	15	33	0.0545		8	24	46	0.0637		7	7	40	65	0.0641	
		3	19	0.0222			14	34	0.0364			23	47	0.0466			39	66	0.0487		
							13	35	0.0212			22	48	0.0326			37	68	0.0265		
3	4	7	17	0.0571			12	36	0.0121			21	49	0.0225			36	69	0.0189		
		6	18	0.0286			11	37	0.0061			20	50	0.0148			35	70	0.0131		
	5	8	19	0.0714			10	38	0.0030			19	51	0.0093			34	71	0.0087		
		7	20	0.0357			16	36	0.0545			18	52	0.0054			33	72	0.0055		
		6	21	0.0179		8	15	37	0.0364			17	53	0.0031			32	73	0.0035		
	6	9	21	0.0833			14	38	0.0242							8	42	70	0.0603		
		8	22	0.0476			13	39	0.0141								41	71	0.0469		
		7	23	0.0238			12	40	0.0081		6	6	29	49	0.0660		39	73	0.0270		
	7	9	24	0.0583			11	41	0.0040			28	50	0.0465			38	74	0.0200		
		8	25	0.0333								27	51	0.0325			36	76	0.0103		
		7	26	0.0167								26	52	0.0206			35	77	0.0070		
		6	27	0.0083		5	5	20	35	0.0754		25	53	0.0130			34	78	0.0047		
		8	26	0.0667			19	36	0.0476			24	54	0.0076							
	8	10	26	0.0667			18	37	0.0278				23	55	0.0043		8	8	52	84	0.0524
		9	27	0.0424			17	38	0.0159			7	30	54	0.0507			51	85	0.0415	
		8	28	0.0242			16	39	0.0079				29	55	0.0367			50	86	0.0325	
		7	29	0.0121			15	40	0.0040				28	56	0.0256			49	87	0.0249	
		6	30	0.0061			14	41	0.0028				27	57	0.0175			46	90	0.0103	
						6	21	39	0.0628				26	58	0.0111			45	91	0.0074	
4	4	12	24	0.0571			20	40	0.0411				25	59	0.0070			44	92	0.0052	
		11	25	0.0286			19	41	0.0260				24	60	0.0041			43	93	0.0035	
		10	26	0.0143			18	42	0.0152												
	5	13	27	0.0556			17	43	0.0087		8	32	58	0.0539							
		12	28	0.0317			16	44	0.0043			31	59	0.0406							

When  $m$  and  $n$  are both greater than 8, compute  $z = \frac{W - m(m+n+1)/2}{\sqrt{mn(m+n+1)/12}}$  and use the  $z$  table (Table A.2).