

Таблиці критичних значень

Критичні значення критерію F – Фішера
 $\alpha=0,05$

		ступені свободи чисельника																																																																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36																															
Ступені свободи знаменника	3	10,139,559,289,129,018,948,898,858,818,798,768,748,738,718,708,698,688,678,678,668,658,658,648,648,638,638,638,628,628,628,618,618,618,618,608,60	4	7,716,946,596,396,266,166,096,046,005,965,945,915,895,875,865,845,835,825,815,805,795,795,785,775,775,765,765,755,755,755,745,745,745,735,735,73	5	6,615,795,415,195,054,954,884,824,774,744,704,684,664,644,624,604,594,584,574,564,554,544,534,534,524,524,514,504,504,504,494,494,484,484,484,47	6	5,995,144,764,534,394,284,214,154,104,064,034,003,983,963,943,923,913,903,883,873,863,863,853,843,833,833,823,823,813,813,803,803,803,793,793,79	7	5,594,744,354,123,973,873,793,733,683,643,603,573,553,533,513,493,483,473,463,443,433,433,423,413,403,403,393,393,383,383,373,373,363,363,363,35	8	5,324,464,073,843,693,583,503,443,393,353,313,283,263,243,223,203,193,173,163,153,143,133,123,123,113,103,103,093,083,083,073,073,073,063,063,06	9	5,124,263,863,633,483,373,293,233,183,143,103,073,053,033,012,992,972,962,952,942,932,922,912,902,892,892,882,872,872,862,862,852,852,852,842,84	10	4,964,103,713,483,333,223,143,073,022,982,942,912,892,862,852,832,812,802,792,772,762,752,752,742,732,722,722,712,702,702,692,692,692,682,682,67	11	4,843,983,593,363,203,093,012,952,902,852,822,792,762,742,722,702,692,672,662,652,642,632,622,612,602,592,592,582,582,572,572,562,562,552,552,54	12	4,753,893,493,263,113,002,912,852,802,752,722,692,662,642,622,602,582,572,562,542,532,522,512,512,502,492,482,482,472,472,462,462,452,452,442,44	13	4,673,813,413,183,032,922,832,772,712,672,632,602,582,552,532,512,502,482,472,462,452,442,432,422,412,412,402,392,392,382,382,372,372,362,362,35	14	4,603,743,343,112,962,852,762,702,652,602,572,532,512,482,462,442,432,412,402,392,382,372,362,352,342,332,332,322,312,312,302,302,292,292,282,28	15	4,543,683,293,062,902,792,712,642,592,542,512,482,452,422,402,382,372,352,342,332,322,312,302,292,282,272,272,262,252,252,242,242,232,232,222,22	16	4,493,633,243,012,852,742,662,592,542,492,462,422,402,372,352,332,322,302,292,282,262,252,242,242,232,222,212,212,202,192,192,182,182,172,172,17	17	4,453,593,202,962,812,702,612,552,492,452,412,382,352,332,312,292,272,262,242,232,222,212,202,192,182,172,172,162,152,152,142,142,132,132,122,12	18	4,413,553,162,932,772,662,582,512,462,412,372,342,312,292,272,252,232,222,202,192,182,172,162,152,142,132,132,122,112,112,102,102,092,092,082,08	19	4,383,523,132,902,742,632,542,482,422,382,342,312,282,262,232,212,202,182,172,162,142,132,122,112,112,102,092,082,082,072,072,062,062,052,052,04	20	4,353,493,102,872,712,602,512,452,392,352,312,282,252,222,202,182,172,152,142,122,112,102,092,082,072,072,062,052,052,042,032,032,022,022,012,01	21	4,323,473,072,842,682,572,492,422,372,322,282,252,222,202,182,162,142,122,112,102,082,072,062,052,052,042,032,022,022,012,002,001,991,991,981,98	22	4,303,443,052,822,662,552,462,402,342,302,262,232,202,172,152,132,112,102,082,072,062,052,042,032,022,012,002,001,991,981,981,971,971,961,961,95	23	4,283,423,032,802,642,532,442,372,322,272,242,202,182,152,132,112,092,082,062,052,042,022,012,012,001,991,981,981,971,971,961,951,951,941,941,931,93	24	4,263,403,012,782,622,512,422,362,302,252,222,182,152,132,112,092,072,052,042,032,012,001,991,981,981,971,971,961,951,951,941,931,931,921,921,911,91	25	4,243,392,992,762,602,492,402,342,282,242,202,162,142,112,092,072,052,042,022,012,001,981,971,961,961,951,941,931,931,921,911,911,901,901,891,89	26	4,233,372,982,742,592,472,392,322,272,222,182,152,122,092,072,052,032,022,001,991,981,971,961,951,941,931,921,911,911,901,891,891,881,881,871,87	27	4,213,352,962,732,572,462,372,312,252,202,172,132,102,082,062,042,022,001,991,971,961,951,941,931,921,911,901,891,891,881,881,871,871,861,861,85	28	4,203,342,952,712,562,452,362,292,242,192,152,122,092,062,042,022,001,991,971,961,951,931,921,911,911,901,891,891,881,881,871,861,861,851,851,841,84	29	4,183,332,932,702,552,432,352,282,222,182,142,102,082,052,032,011,991,971,961,941,931,921,911,901,891,881,881,871,861,851,851,841,841,831,831,82	30	4,173,322,922,692,532,422,332,272,212,162,132,092,062,042,011,991,981,961,951,931,921,911,901,891,881,871,861,851,851,841,831,831,821,821,811,81	31	4,163,302,912,682,522,412,322,252,202,152,112,082,052,032,001,981,961,951,931,921,911,901,881,881,871,861,851,841,831,831,821,821,811,811,801,80	32	4,153,292,902,672,512,402,312,242,192,142,102,072,042,011,991,971,951,941,921,911,901,881,871,861,851,851,841,831,821,821,811,801,801,791,791,78	33	4,143,282,892,662,502,392,302,232,182,132,092,062,032,001,981,961,941,931,911,901,891,871,861,851,841,831,831,821,811,811,801,791,791,781,781,77	34	4,133,282,882,652,492,382,292,232,172,122,082,052,021,991,971,951,931,921,901,891,881,861,851,841,831,821,821,811,801,801,791,781,781,771,771,76	35	4,123,272,872,642,492,372,292,222,162,112,072,042,011,991,961,941,921,911,891,881,871,851,841,831,821,821,811,801,791,791,781,771,771,761,761,75	36	4,113,262,872,632,482,362,282,212,152,112,072,032,001,981,951,931,921,901,881,871,861,851,831,821,811,811,801,791,781,781,771,761,761,751,751,74

Критичні значення критерію U – Манна-Вітні
для рівня статистичної значущості $\alpha \leq 0,05$ та $\alpha \leq 0,01$

$n_1 \backslash n_2$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	$\alpha = 0,05$																													
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	11	14	17	20	24	27																					
11	1	5	8	12	16	19	23	27	31	34																				
12	2	5	9	13	17	21	26	30	34	38	42																			
13	2	6	10	15	19	24	28	33	37	42	47	51																		
14	3	7	11	16	21	26	31	36	41	46	51	56	61																	
15	3	7	12	18	23	28	33	39	44	50	55	61	66	72																
16	3	8	14	19	25	30	36	42	48	54	60	65	71	77	83															
17	3	9	15	20	26	33	39	45	51	57	64	70	77	83	89	96														
18	4	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	80	87	94	101	109	116	123												
20	4	11	18	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138											
21	-	-	19	26	34	41	49	57	65	73	81	89	97	105	113	121	130	138	146	154										
22	-	-	20	28	36	44	52	60	69	77	85	94	102	111	119	128	136	145	154	162	171									
23	-	-	21	29	37	46	55	63	72	81	90	99	107	116	125	134	143	152	161	170	180	189								
24	-	-	22	31	39	48	57	66	75	85	94	103	113	122	131	141	150	160	169	179	188	198	207							
25	-	-	23	32	41	50	60	69	79	89	98	108	118	128	137	147	157	167	177	187	197	207	217	227						
26	-	-	24	33	43	53	62	72	82	93	103	113	123	133	143	154	164	174	185	195	206	216	226	237	247					
27	-	-	25	35	45	55	65	75	86	96	107	118	128	139	150	160	171	182	193	203	213	225	236	247	258	268				
28	-	-	26	36	47	57	68	79	89	100	111	122	133	144	156	167	178	189	200	212	223	234	245	257	268	279	291			
29	-	-	27	38	48	59	70	82	93	104	116	127	139	150	162	173	185	196	208	220	232	243	255	267	278	290	302	314		
30	-	-	28	39	50	62	73	85	96	108	120	132	144	156	168	180	192	204	216	228	240	252	265	277	289	301	313	326	338	

$n_1 \backslash n_2$	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	$\alpha = 0,05$																											
31	29	41	52	64	76	88	100	112	124	137	149	161	174	186	199	211	224	263	249	261	274	287	299	312	325	337	350	363
32	30	42	54	66	78	91	103	116	129	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375
33	31	43	56	68	81	94	107	120	133	146	159	173	186	199	213	226	239	253	266	280	293	307	320	334	347	361	374	388
34	32	45	58	71	84	97	110	124	137	151	164	178	192	206	219	233	247	261	275	289	303	317	331	345	359	373	387	401
35	33	46	59	73	86	100	114	128	142	156	170	184	198	212	226	241	255	269	284	298	312	327	341	356	370	385	399	413
36	35	48	61	75	89	103	117	132	146	160	175	189	204	219	233	248	263	278	292	307	322	337	352	367	381	396	411	426
37	36	49	63	77	92	106	121	135	150	165	180	195	210	225	240	255	271	286	301	316	332	347	362	378	393	408	424	439
38	37	51	65	79	94	109	124	139	155	170	185	201	216	232	247	263	278	294	310	325	341	357	373	388	404	420	436	452
39	38	52	67	82	97	112	128	143	159	175	190	206	222	238	254	270	286	302	318	335	351	367	383	399	416	432	448	464
40	39	53	69	84	100	115	131	147	163	179	196	212	228	245	261	278	294	331	327	344	360	377	394	410	427	444	460	477
41	40	55	70	86	102	118	135	151	168	184	201	218	234	251	268	285	302	319	336	353	370	387	404	421	438	456	473	490
42	41	56	72	88	105	121	138	155	172	189	206	223	240	258	275	292	310	327	345	362	380	397	415	432	450	467	485	503
43	42	58	74	91	107	124	142	159	176	194	211	229	247	264	282	300	318	335	353	371	389	407	425	443	461	479	497	515
44	43	59	76	93	110	128	145	163	181	199	216	235	253	271	289	307	325	344	362	380	399	417	436	454	473	491	510	528
45	44	61	78	95	113	131	149	167	185	203	222	240	259	277	296	315	333	352	371	390	408	427	446	465	484	503	522	541
46	45	62	80	97	115	134	152	171	189	208	227	246	265	284	303	322	341	360	380	399	418	437	457	476	495	515	534	554
47	46	64	81	100	118	137	156	175	194	213	232	251	271	290	310	329	349	369	388	408	428	447	467	487	507	527	547	566
48	47	65	83	102	121	140	159	178	198	218	237	257	277	297	317	337	357	377	397	417	437	458	478	498	518	539	559	579
49	48	66	85	104	123	143	163	182	202	222	243	263	283	303	324	344	365	385	406	426	447	468	488	509	530	550	571	592
50	49	68	87	106	126	146	166	186	207	227	248	268	289	310	331	352	372	393	414	435	457	478	499	520	541	562	583	605
51	50	69	89	109	129	149	170	190	211	232	253	274	295	316	338	359	380	402	423	445	466	488	509	531	553	574	596	618
52	51	71	91	111	131	152	173	194	215	237	258	280	301	323	345	366	388	410	432	454	476	498	520	542	564	586	608	630
53	52	72	92	113	134	155	177	198	220	341	263	285	307	329	352	374	396	418	441	463	485	508	530	553	575	598	620	643
54	53	74	94	115	137	158	180	202	224	246	269	291	313	336	359	381	404	427	449	472	495	518	541	564	587	610	633	656
55	54	75	96	118	139	161	184	206	228	251	274	297	319	342	365	389	412	435	458	481	505	528	551	575	598	622	645	669
56	55	76	98	120	142	164	187	210	233	256	279	302	326	349	372	396	420	443	467	491	514	538	562	586	610	634	657	681
57	57	78	100	122	145	167	191	214	237	261	284	308	332	355	379	403	427	451	476	500	524	548	572	597	621	645	670	694
58	58	79	102	124	147	171	194	218	241	265	289	314	338	362	386	411	435	460	484	509	534	558	583	608	633	657	682	707
59	59	81	103	127	150	174	198	222	246	270	295	319	344	369	393	418	443	468	493	518	543	568	594	619	644	669	694	720
60	60	82	105	129	153	177	201	225	250	275	300	325	350	375	400	426	451	476	502	527	553	578	604	630	655	681	707	733

$n_1 \backslash n_2$	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
	$\alpha = 0,01$																													
5	-	-	0	1																										
6	-	-	1	2	3																									
7	-	0	1	3	4	6																								
8	-	0	2	4	6	7	9																							
9	-	1	3	5	7	9	11	14																						
10	-	1	3	6	8	11	13	16	19																					
11	-	1	4	7	9	12	15	18	22	25																				
12	-	2	5	8	11	14	17	21	24	28	31																			
13	0	2	5	9	12	16	20	23	27	31	35	39																		
14	0	2	6	10	13	17	22	26	30	34	38	43	47																	
15	0	3	7	11	15	19	24	28	33	37	42	47	51	56																
16	0	3	7	12	16	21	26	31	36	41	46	51	56	61	66															
17	0	4	8	13	18	23	28	33	38	44	49	55	60	66	71	77														
18	0	4	9	14	19	24	30	36	41	47	53	59	65	70	76	82	88													
19	1	4	9	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101												
20	1	5	10	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114											
21	-	-	10	16	22	29	35	42	49	56	63	70	77	84	91	98	105	113	120	127										
22	-	-	10	17	23	30	37	45	52	59	66	74	81	89	96	104	111	119	127	134	142									
23	-	-	11	18	25	32	39	47	55	62	70	78	86	94	102	109	117	125	133	141	150	158								
24	-	-	12	19	26	34	42	49	57	66	74	82	90	98	107	115	123	132	140	149	154	166	174							
25	-	-	12	20	27	35	44	52	60	69	77	86	95	103	112	121	130	138	147	156	165	174	183	192						
26	-	-	13	21	29	37	46	54	63	72	81	90	99	108	117	126	136	145	154	163	173	182	191	201	210					
27	-	-	14	22	30	39	48	57	66	75	85	94	103	113	122	132	142	151	161	171	180	190	200	209	219	229				
28	-	-	14	23	32	41	50	59	69	78	88	98	108	118	128	138	148	158	168	178	188	198	208	218	229	239	249			
29	-	-	15	24	33	42	52	62	72	82	92	102	112	123	133	143	154	164	175	185	196	206	217	227	238	249	259	270		
30	-	-	15	25	34	44	54	64	75	85	95	106	117	127	138	169	160	171	182	192	203	214	225	236	247	258	270	281	292	

$n_1 \backslash n_2$	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	$\alpha = 0,01$																											
31	16	26	36	46	56	67	77	88	99	110	121	132	143	155	166	177	188	200	211	223	234	245	257	268	280	291	303	314
32	17	27	37	47	58	69	80	91	103	114	126	137	149	160	172	184	195	207	219	231	242	254	266	278	290	302	314	326
33	17	28	38	49	60	72	83	95	106	118	130	142	154	166	178	190	202	214	227	239	251	263	276	288	300	313	325	337
34	18	29	40	51	62	74	86	98	110	122	134	147	159	172	184	197	209	222	234	247	260	272	285	298	311	323	336	349
35	19	30	41	53	64	77	89	101	114	126	139	152	164	177	190	203	216	229	242	255	268	281	294	308	321	334	347	360
36	19	31	42	54	67	79	92	104	117	130	143	156	170	183	196	210	223	236	250	263	277	290	304	318	331	345	358	372
37	20	32	44	56	69	81	95	108	121	134	148	161	175	189	202	216	230	244	258	271	285	299	313	327	341	355	370	384
38	21	33	45	58	71	84	97	111	125	138	152	166	180	194	208	223	237	251	265	280	294	308	323	337	352	366	381	395
39	21	34	46	59	73	86	100	114	128	142	157	171	185	200	214	229	244	258	273	288	303	317	332	347	362	377	392	407
40	22	35	48	61	75	89	103	117	132	146	161	176	191	206	221	236	251	266	281	296	311	326	342	357	372	388	403	418
41	23	36	49	63	77	91	106	121	136	151	166	181	196	211	227	242	258	273	289	304	320	336	351	367	383	398	414	430
42	23	37	50	65	79	94	109	124	139	155	170	186	201	217	233	249	265	280	296	312	328	345	361	377	393	409	425	442
43	24	38	52	66	81	96	112	127	143	159	175	190	207	223	239	255	271	288	304	321	337	354	370	387	403	420	437	453
44	25	39	53	68	83	99	115	130	146	163	179	195	212	228	245	262	278	295	312	329	346	363	380	397	414	431	448	465
45	25	40	54	70	85	101	117	134	150	167	183	200	217	234	251	268	285	303	320	337	354	372	389	407	424	441	459	476
46	26	41	56	71	87	104	120	137	154	171	188	205	222	240	257	275	292	310	328	345	363	381	399	416	434	452	470	488
47	27	42	57	73	90	106	123	140	157	175	192	210	228	245	263	281	299	317	335	353	372	390	408	426	445	463	481	500
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58	651	674	697	721	744	767	790	814	837	861	884	907	931	954	978	1001	1024	1048	1071	1095	1118	1142	1165	1189	1213	1236	1260			
59	663	687	710	734	758	781	805	829	853	877	900	924	948	972	996	1020	1044	1068	1091	1115	1139	1163	1187	1211	1235	1254	1283	1307		
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Критичні значення критерія Т-Вілкоксона

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13	21	12	36	227	185
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18	47	32	41	302	252
19	53	37	42	319	266
20	60	43	43	336	281
21	67	49	44	353	296
22	75	55	45	371	312
23	83	62	46	389	328
24	92	69	47	407	345
25	100	76	48	426	362
26	110	84	49	446	379
27	119	92	50	466	397