Critical Values for the χ^2 PDF

Critical values of $\chi^2_{1-\alpha/2}$ and $\chi^2_{\alpha/2}$ for the χ^2 distribution (both tails)								
Two tails →	90% confidence		95% confidence		98% confidence		99% confidence	
α →	0.10		0.05		0.02		0.01	
Single tail →	$1-\alpha/2$	$\alpha/2$	$1-\alpha/2$	$\alpha/2$	$1-\alpha/2$	$\alpha/2$	$1-\alpha/2$	$\alpha/2$
Probability →	0.95	0.05	0.975	0.025	0.99	0.01	0.995	0.005
df = ↓	$\chi^2_{1-\alpha/2}$	$\chi^2_{\alpha/2}$	$\chi^2_{1-\alpha/2}$	$\chi^2_{\alpha/2}$	$\chi^2_{1-\alpha/2}$	$\chi^2_{\alpha/2}$	$\chi^2_{1-\alpha/2}$	$\chi^2_{\alpha/2}$
1	0.0039	3.8415	0.0010	5.0239	0.0002	6.6349	0.0000	7.8794
2	0.1026	5.9915	0.0506	7.3778	0.0201	9.2104	0.0100	10.5965
3	0.3518	7.8147	0.2158	9.3484	0.1148	11.3449	0.0717	12.8381
4	0.7107	9.4877	0.4844	11.1433	0.2971	13.2767	0.2070	14.8602
5	1.1455	11.0705	0.8312	12.8325	0.5543	15.0863	0.4118	16.7496
6	1.6354	12.5916	1.2373	14.4494	0.8721	16.8119	0.6757	18.5475
7	2.1673	14.0671	1.6899	16.0128	1.2390	18.4753	0.9893	20.2777
8	2.7326	15.5073	2.1797	17.5345	1.6465	20.0902	1.3444	21.9549
9	3.3251	16.9190	2.7004	19.0228	2.0879	21.6660	1.7349	23.5893
10	3.9403	18.3070	3.2470	20.4832	2.5582	23.2093	2.1558	25.1881
11	4.5748	19.6752	3.8157	21.9200	3.0535	24.7250	2.6032	26.7569
12	5.2260	21.0261	4.4038	23.3367	3.5706	26.2170	3.0738	28.2997
13	5.8919	22.3620	5.0087	24.7356	4.1069	27.6882	3.5650	29.8193
14	6.5706	23.6848	5.6287	26.1189	4.6604	29.1412	4.0747	31.3194
15	7.2609	24.9958	6.2621	27.4884	5.2294	30.5780	4.6009	32.8015
16	7.9616	26.2962	6.9077	28.8453	5.8122	31.9999	5.1422	34.2671
17	8.6718	27.5871	7.5642	30.1910	6.4077	33.4087	5.6973	35.7184
18	9.3904	28.8693	8.2307	31.5264	7.0149	34.8052	6.2648	37.1564
19	10.1170	30.1435	8.9065	32.8523	7.6327	36.1908	6.8439	38.5821
20	10.8508	31.4104	9.5908	34.1696	8.2604	37.5663	7.4338	39.9969
21	11.5913	32.6706	10.2829	35.4789	8.8972	38.9322	8.0336	41.4009
22	12.3380	33.9245	10.9823	36.7807	9.5425	40.2894	8.6427	42.7957
23	13.0905	35.1725	11.6885	38.0756	10.1957	41.6383	9.2604	44.1814
24	13.8484	36.4150	12.4011	39.3641	10.8563	42.9798	9.8862	45.5584
25	14.6114	37.6525	13.1197	40.6465	11.5240	44.3140	10.5196	46.9280
26	15.3792	38.8851	13.8439	41.9231	12.1982	45.6416	11.1602	48.2898
27	16.1514	40.1133	14.5734	43.1945	12.8785	46.9628	11.8077	49.6450
28	16.9279	41.3372	15.3079	44.4608	13.5647	48.2782	12.4613	50.9936
29	17.7084	42.5569	16.0471	45.7223	14.2564	49.5878	13.1211	52.3355
30	18.4927	43.7730	16.7908	46.9792	14.9535	50.8922	13.7867	53.6719
35	22.4650	49.8018	20.5694	53.2033	18.5089	57.3420	17.1917	60.2746
40	26.5093	55.7585	24.4331	59.3417	22.1642	63.6908	20.7066	66.7660
50	34.7642	67.5048	32.3574	71.4202	29.7067	76.1538	27.9908	79.4898
100	77.9294	124.3421	74.2219	129.5613	70.0650	135.8069	67.3275	140.1697
500	449.1467	553.1269	439.9360	563.8514	429.3874	576.4931	422.3034	585.2060
1000	927.5944	1074.6794	914.2572	1089.5307	898.9124	1106.9690	888.5631	1118.9475
∞	∞	∞	∞	∞	∞	∞	∞	∞