

Chi-square Distribution Table

This table lists selected quantiles for the $\chi^2(\text{df})$ distribution; that is, values of x for which

$$P(X \leq x) = \int_0^x \frac{1}{\Gamma(r/2)2^{r/2}} x^{(r/2)-1} e^{-x/2} dx,$$

where $r = \text{df}$.

df	0.010	0.025	0.050	0.100	0.900	0.950	0.975	0.990
1	0.0002	0.0010	0.0039	0.0158	2.7055	3.8415	5.0239	6.6349
2	0.0201	0.0506	0.1026	0.2107	4.6052	5.9915	7.3778	9.2103
3	0.1148	0.2158	0.3518	0.5844	6.2514	7.8147	9.3484	11.3449
4	0.2971	0.4844	0.7107	1.0636	7.7794	9.4877	11.1433	13.2767
5	0.5543	0.8312	1.1455	1.6103	9.2364	11.0705	12.8325	15.0863
6	0.8721	1.2373	1.6354	2.2041	10.6446	12.5916	14.4494	16.8119
7	1.2390	1.6899	2.1673	2.8331	12.0170	14.0671	16.0128	18.4753
8	1.6465	2.1797	2.7326	3.4895	13.3616	15.5073	17.5345	20.0902
9	2.0879	2.7004	3.3251	4.1682	14.6837	16.9190	19.0228	21.6660
10	2.5582	3.2470	3.9403	4.8652	15.9872	18.3070	20.4832	23.2093
11	3.0535	3.8157	4.5748	5.5778	17.2750	19.6751	21.9200	24.7250
12	3.5706	4.4038	5.2260	6.3038	18.5493	21.0261	23.3367	26.2170
13	4.1069	5.0088	5.8919	7.0415	19.8119	22.3620	24.7356	27.6882
14	4.6604	5.6287	6.5706	7.7895	21.0641	23.6848	26.1189	29.1412
15	5.2293	6.2621	7.2609	8.5468	22.3071	24.9958	27.4884	30.5779
16	5.8122	6.9077	7.9616	9.3122	23.5418	26.2962	28.8454	31.9999
17	6.4078	7.5642	8.6718	10.0852	24.7690	27.5871	30.1910	33.4087
18	7.0149	8.2307	9.3905	10.8649	25.9894	28.8693	31.5264	34.8053
19	7.6327	8.9065	10.1170	11.6509	27.2036	30.1435	32.8523	36.1909
20	8.2604	9.5908	10.8508	12.4426	28.4120	31.4104	34.1696	37.5662
21	8.8972	10.2829	11.5913	13.2396	29.6151	32.6706	35.4789	38.9322
22	9.5425	10.9823	12.3380	14.0415	30.8133	33.9244	36.7807	40.2894
23	10.1957	11.6886	13.0905	14.8480	32.0069	35.1725	38.0756	41.6384
24	10.8564	12.4012	13.8484	15.6587	33.1962	36.4150	39.3641	42.9798
25	11.5240	13.1197	14.6114	16.4734	34.3816	37.6525	40.6465	44.3141
26	12.1981	13.8439	15.3792	17.2919	35.5632	38.8851	41.9232	45.6417
27	12.8785	14.5734	16.1514	18.1139	36.7412	40.1133	43.1945	46.9629
28	13.5647	15.3079	16.9279	18.9392	37.9159	41.3371	44.4608	48.2782
29	14.2565	16.0471	17.7084	19.7677	39.0875	42.5570	45.7223	49.5879
30	14.9535	16.7908	18.4927	20.5992	40.2560	43.7730	46.9792	50.8922