



Percentile Points of Chi-Square Distributions^a: $p\chi^2_v = 1 - \alpha\chi^2_v$.

$\alpha = .05$ $\alpha = .01$

ν	$p = .01$.02	.05	.10	.20	.30	.50	.70	.80	.90	.95	.98	.99	.999	ν	Mode	Skewness ΩK	Kurtosis Υ_2
1	.00016	.00063	.00393	.0158	.0642	.148	.455	1.07	1.64	2.71	3.84	5.41	6.64	10.83	1			12.0
2	.0201	.0404	.103	.211	.446	.713	1.39	2.41	3.22	4.60	5.99	7.82	9.21	13.82	2		1.00	6.0
3	.115	.185	.352	.584	1.00	1.42	2.37	3.66	4.64	6.25	7.82	9.84	11.34	16.27	3	1	.82	4.0
4	.297	.429	.711	1.06	1.65	2.20	3.36	4.88	5.99	7.78	9.49	11.67	13.28	18.47	4	2	.71	3.0
5	.554	.752	1.14	1.61	2.34	3.00	4.35	6.06	7.29	9.24	11.07	13.39	15.09	20.52	5	3	.63	2.4
6	.872	1.13	1.64	2.20	3.07	3.83	5.35	7.23	8.56	10.64	12.59	15.03	16.81	22.46	6	4	.58	2.0
7	1.24	1.56	2.17	2.83	3.82	4.67	6.35	8.38	9.80	12.02	14.07	16.62	18.48	24.32	7	5	.53	1.7
8	1.65	2.03	2.73	3.49	4.59	5.53	7.34	9.52	11.03	13.36	15.51	18.17	20.09	26.12	8	6	.50	1.5
9	2.09	2.53	3.32	4.17	5.38	6.39	8.34	10.66	12.24	14.68	16.92	19.68	21.67	27.88	9	7	.47	1.3
10	2.56	3.06	3.94	4.86	6.18	7.27	9.34	11.78	13.44	15.99	18.31	21.16	23.21	29.59	10	8	.45	1.2
11	3.05	3.61	4.58	5.58	6.99	8.15	10.34	12.90	14.63	17.28	19.68	22.62	24.72	31.26	11	9	.43	1.1
12	3.57	4.18	5.23	6.30	7.81	9.03	11.34	14.01	15.81	18.55	21.03	24.05	26.22	32.91	12	10	.41	1.0
13	4.11	4.76	5.89	7.04	8.63	9.93	12.34	15.12	16.98	19.81	22.36	25.47	27.69	34.53	13	11	.39	.92
14	4.66	5.37	6.57	7.79	9.47	10.82	13.34	16.22	18.15	21.06	23.68	26.87	29.14	36.12	14	12	.38	.86
15	5.23	5.98	7.26	8.55	10.31	11.72	14.34	17.32	19.31	22.31	25.00	28.26	30.58	37.70	15	13	.37	.80
16	5.81	6.61	7.96	9.31	11.15	12.62	15.34	18.42	20.46	23.54	26.30	29.63	32.00	39.25	16	14	.35	.75
17	6.41	7.26	8.67	10.08	12.00	13.53	16.34	19.51	21.62	24.77	27.59	31.00	33.41	40.79	17	15	.34	.71
18	7.02	7.91	9.39	10.86	12.86	14.44	17.34	20.60	22.76	25.99	28.87	32.35	34.80	42.31	18	16	.33	.67
19	7.63	8.57	10.12	11.65	13.72	15.35	18.34	21.69	23.90	27.20	30.14	33.69	36.19	43.82	19	17	.32	.63
20	8.26	9.24	10.85	12.44	14.58	16.27	19.34	22.78	25.04	28.41	31.41	35.02	37.57	45.32	20	18	.32	.60
21	8.90	9.92	11.59	13.24	15.44	17.18	20.34	23.86	26.17	29.62	32.67	36.34	38.93	46.80	21	19	.31	.57
22	9.54	10.60	12.34	14.04	16.31	18.10	21.34	24.94	27.30	30.81	33.92	37.66	40.29	48.27	22	20	.30	.55
23	10.20	11.29	13.09	14.85	17.19	19.02	22.34	26.02	28.43	32.01	35.17	38.97	41.64	49.73	23	21	.29	.52
24	10.86	11.90	13.85	15.66	18.06	19.94	23.34	27.10	29.55	33.20	36.42	40.27	42.98	51.18	24	22	.29	.50
25	11.52	12.70	14.61	16.47	18.94	20.87	24.34	28.17	30.68	34.38	37.65	41.57	44.31	52.62	25	23	.28	.48
26	12.20	13.41	15.38	17.29	19.82	21.79	25.34	29.25	31.80	35.56	38.88	42.86	45.64	54.05	26	24	.28	.46
27	12.88	14.12	16.15	18.11	20.70	22.72	26.34	30.32	32.91	36.74	40.11	44.14	46.96	55.48	27	25	.27	.44
28	13.56	14.85	16.93	18.94	21.59	23.65	27.34	31.39	34.03	37.92	41.34	45.42	48.28	56.89	28	26	.27	.43
29	14.26	15.57	17.71	19.77	22.48	24.58	28.34	32.46	35.14	39.09	42.56	46.69	49.59	58.30	29	27	.26	.41
30	14.95	16.31	18.49	20.60	23.36	25.51	29.34	33.53	36.25	40.26	43.77	47.96	50.89	59.70	30	28	.26	.40
40	22.16	23.84	26.51	29.05	32.38	34.81	39.34	44.17	47.27	51.81	55.76	60.44	63.69	73.40	40	38	.22	.30
50	24.71	31.66	34.76	37.69	41.45	44.31	49.33	54.72	58.16	63.17	67.51	72.61	76.15	81.66	50	48	.20	.29
60	37.48	38.70	43.19	46.46	50.64	53.81	54.33	65.23	68.97	74.40	79.08	84.58	88.38	99.61	60	58	.18	.20
70	45.44	47.89	51.74	55.33	59.90	63.35	69.33	75.69	79.72	85.53	90.53	96.39	100.4	112.3	70	68	.17	.17
80	53.54	56.21	60.34	64.28	69.2	72.9	79.33	86.1	90.4	96.58	101.9	108.1	112.3	124.8	80	78	.16	.15
90	61.75	64.64	69.13	73.29	78.6	82.5	89.33	96.5	101.1	107.6	113.1	119.6	124.1	137.2	90	88	.15	.13
100	70.06	73.14	77.43	82.36	87.9	92.1	99.33	106.9	111.7	118.5	124.3	131.1	135.8	149.4	100	98	.14	.12