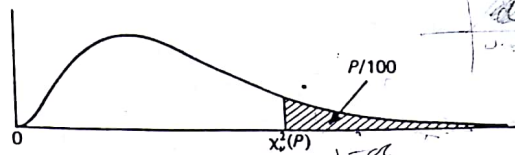TABLE 8. PERCENTAGE POINTS OF THE χ²-DISTRIBUTION

This table gives percentage points $\chi^2_\nu(P)$ defined by the equation

$$\frac{P}{100} = \frac{1}{2^{\nu/2}\,\Gamma(\frac{\nu}{2})} \int_{\chi^2_\nu(P)}^{\infty} x^{\frac{1}{2}\nu-1}\, e^{-\frac{1}{2}x}\, dx.$$

If X is a variable distributed as χ^2 with ν degrees of freedom, $P/100$ is the probability that $X \geqslant \chi^2_\nu(P)$.

For $\nu > 100$, $\sqrt{2X}$ is approximately normally distributed with mean $\sqrt{2\nu-1}$ and unit variance.

(The above shape applies for $\nu \geqslant 3$ only. When $\nu < 3$ the mode is at the origin.)

the mode is

60

	0.2750
	1.022
	1.869
	2.753
	3.655
	4.570
	5.493
	6.423
	7.357

P	50	40	30	20	10	5	2.5	1	0.5	0.1	0.05
$\nu = 1$	0.4549	0.7083	1.074	1.642	2.706	3.841	5.024	6.635	7.879	10.83	12.12
2	1.386	1.833	2.408	3.219	4.605	5.991	7.378	9.210	10.60	13.82	15.20
3	2.366	2.946	3.665	4.642	6.251	7.815	9.348	11.34	12.84	16.27	17.73
4	3.357	4.045	4.878	5.989	7.779	9.488	11.14	13.28	14.86	18.47	20.00
5	4.351	5.132	6.064	7.289	9.236	11.07	12.83	15.09	16.75	20.52	22.11
6	5.348	6.211	7.231	8.558	10.64	12.59	14.45	16.81	18.55	22.46	24.10
7	6.346	7.283	8.383	9.803	12.02	14.07	16.01	18.48	20.28	24.32	26.02
8	7.344	8.351	9.524	11.03	13.36	15.51	17.53	20.09	21.95	26.12	27.87
9	8.343	9.414	10.66	12.24	14.68	16.92	19.02	21.67	23.59	27.88	29.67
10	9.342	10.47	11.78	13.44	15.99	18.31	20.48	23.21	25.19	29.59	31.42
11	10.34	11.53	12.90	14.63	17.28	19.68	21.92	24.72	26.76	31.26	33.14
12	11.34	12.58	14.01	15.81	18.55	21.03	23.34	26.22	28.30	32.91	34.82
13	12.34	13.64	15.12	16.98	19.81	22.36	24.74	27.69	29.82	34.53	36.48
14	13.34	14.69	16.22	18.15	21.06	23.68	26.12	29.14	31.32	36.12	38.11
15	14.34	15.73	17.32	19.31	22.31	25.00	27.49	30.58	32.80	37.70	39.72
16	15.34	16.78	18.42	20.47	23.54	26.30	28.85	32.00	34.27	39.25	41.31
17	16.34	17.82	19.51	21.61	24.77	27.59	30.19	33.41	35.72	40.79	42.88
18	17.34	18.87	20.60	22.76	25.99	28.87	31.53	34.81	37.16	42.31	44.43
19	18.34	19.91	21.69	23.90	27.20	30.14	32.85	36.19	38.58	43.82	45.97
20	19.34	20.95	22.77	25.04	28.41	31.41	34.17	37.57	40.00	45.31	47.50
21	20.34	21.99	23.86	26.17	29.62	32.67	35.48	38.93	41.40	46.80	49.01
22	21.34	23.03	24.94	27.30	30.81	33.92	36.78	40.29	42.80	48.27	50.51
23	22.34	24.07	26.02	28.43	32.01	35.17	38.08	41.64	44.18	49.73	52.00
24	23.34	25.11	27.10	29.55	33.20	36.42	39.36	42.98	45.56	51.18	53.48
25	24.34	26.14	28.17	30.68	34.38	37.65	40.65	44.31	46.93	52.62	54.95
26	25.34	27.18	29.25	31.79	35.56	38.89	41.92	45.64	48.29	54.05	56.41
27	26.34	28.21	30.32	32.91	36.74	40.11	43.19	46.96	49.64	55.48	57.86
28	27.34	29.25	31.39	34.03	37.92	41.34	44.46	48.28	50.99	56.89	59.30
29	28.34	30.28	32.46	35.14	39.09	42.56	45.72	49.59	52.34	58.30	60.73
30	29.34	31.32	33.53	36.25	40.26	43.77	46.98	50.89	53.67	59.70	62.16
32	31.34	33.38	35.66	38.47	42.58	46.19	49.48	53.49	56.33	62.49	65.00
34	33.34	35.44	37.80	40.68	44.90	48.60	51.97	56.06	58.96	65.25	67.80
36	35.34	37.50	39.92	42.88	47.21	51.00	54.44	58.62	61.58	67.99	70.59
38	37.34	39.56	42.05	45.08	49.51	53.38	56.90	61.16	64.18	70.70	73.35
40	39.34	41.62	44.16	47.27	51.81	55.76	59.34	63.69	66.77	73.40	76.09
50	49.33	51.89	54.72	58.16	63.17	67.50	71.42	76.15	79.49	86.66	89.56
60	59.33	62.13	65.23	68.97	74.40	79.08	83.30	88.38	91.95	99.61	102.7
70	69.33	72.36	75.69	79.71	85.53	90.53	95.02	100.4	104.2	112.3	115.6
80	79.33	82.57	86.12	90.41	96.58	101.9	106.6	112.3	116.3	124.8	128.3
90	89.33	92.76	96.52	101.1	107.6	113.1	118.1	124.1	128.3	137.2	140.8
100	99.33	102.9	106.9	111.7	118.5	124.3	129.6	135.8	140.2	149.4	153.2

	8.295
	9.237
	10.18
	11.13
	12.08
	13.03
	13.98
	14.94
	15.89
	16.85
	17.81
	18.77
	19.73
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	21.65
	22.62
	23.58
	24.54
	25.51
	26.48
	27.44
	29.38
	31.31
	33.25
	35.19
	37.13
	46.86
	56.62
	66.40
	76.19
	85.99
	95.81