

Table 5. PROBABILITIES FOR THE χ^2 DISTRIBUTION [χ^2_v]

[Calculated with *qchisq* in **Spplus** V3.0R1 using 17-digit arithmetic; accuracy of all digits in the table entries has *not* been verified]

Df (<i>v</i>)	Each table entry is the value (<i>y</i>) of the random variable $Y \sim \chi^2_v$ such that $\Pr(Y \leq y) =$ the probability given in the column heading																		
	0.50	0.60	0.70	0.75	0.80	0.85	0.90	0.95	0.975	0.99	0.995	0.999	0.999 5	0.999 9	0.999 95	0.999 99	0.999 995	0.999 999	
1	.454 936	.708 326	1.07 419	1.32 330	1.64 237	2.07 225	2.70 554	3.84 146	5.02 389	6.63 490	7.87 944	10.8 276	12.1 157	15.1 367	16.4 481	19.5 114	20.8 373	23.9 281	1
2	1.38 629	1.83 258	2.40 795	2.77 259	3.21 888	3.79 424	4.60 517	5.99 146	7.37 776	9.21 034	10.5 966	13.8 155	15.2 018	18.4 207	19.8 070	23.0 259	24.4 121	27.6 310	
3	2.36 597	2.94 617	3.66 487	4.10 834	4.64 163	5.31 705	6.25 139	7.81 473	9.34 840	11.3 449	12.8 382	16.2 662	17.7 300	21.1 075	22.5 547	25.9 017	27.3 384	30.6 648	
4	3.35 669	4.04 463	4.87 843	5.38 527	5.98 862	6.74 488	7.77 944	9.48 773	11.1 433	13.2 767	14.8 603	18.4 668	19.9 974	23.5 127	25.0 133	28.4 733	29.9 545	33.3 768	
5	4.35 146	5.13 187	6.06 443	6.62 568	7.28 928	8.11 520	9.23 636	11.0 705	12.8 325	15.0 863	16.7 496	20.5 150	22.1 053	25.7 448	27.2 937	30.8 562	32.3 781	35.8 882	5
6	5.34 812	6.21 076	7.23 114	7.84 080	8.55 806	9.44 610	10.6 446	12.5 916	14.4 494	16.8 119	18.5 476	22.4 577	24.1 028	27.8 563	29.4 497	33.1 071	34.6 667	38.2 583	
7	6.34 581	7.28 321	8.38 343	9.03 715	9.80 325	10.7 479	12.0 170	14.0 671	16.0 128	18.4 753	20.2 777	24.3 219	26.0 178	29.8 775	31.5 124	35.2 585	36.8 535	40.5 218	
8	7.34 412	8.35 053	9.52 446	10.2 189	11.0 301	12.0 271	13.3 616	15.5 073	17.5 345	20.0 902	21.9 550	26.1 245	27.8 680	31.8 276	33.5 017	37.3 316	38.9 600	42.7 009	
9	8.34 283	9.41 364	10.6 564	11.3 888	12.2 421	13.2 880	14.6 837	16.9 190	19.0 228	21.6 660	23.5 894	27.8 772	29.6 658	33.7 199	35.4 312	39.3 407	41.0 009	44.8 109	
10	9.34 182	10.4 732	11.7 807	12.5 489	13.4 420	14.5 339	15.9 872	18.3 070	20.4 831	23.2 092	25.1 882	29.5 883	31.4 198	35.5 640	37.3 107	41.2 962	42.9 869	46.8 630	10
11	10.3 410	11.5 298	12.8 987	13.7 007	14.6 314	15.7 671	17.2 750	19.6 751	21.9 200	24.7 249	26.7 568	31.2 641	33.1 366	37.3 670	39.1 476	43.2 060	44.9 259	48.8 656	
12	11.3 403	12.5 838	14.0 111	14.8 454	15.8 120	16.9 893	18.5 493	21.0 260	23.3 366	26.2 169	28.2 995	32.9 095	34.8 213	39.1 344	40.9 476	45.0 761	46.8 242	50.8 253	
13	12.3 398	13.6 356	15.1 187	15.9 839	16.9 848	18.2 020	19.8 119	22.3 620	24.7 356	27.6 882	29.8 195	34.5 282	36.4 778	40.8 707	42.7 153	46.9 116	48.6 868	52.7 471	
14	13.3 393	14.6 853	16.2 221	17.1 169	18.1 508	19.4 062	21.0 641	23.6 848	26.1 189	29.1 412	31.3 193	36.1 233	38.1 094	42.5 793	44.4 544	48.7 161	50.5 176	54.6 353	
15	14.3 389	15.7 332	17.3 217	18.2 451	19.3 107	20.6 030	22.3 071	24.9 958	27.4 884	30.5 779	32.8 013	37.6 973	39.7 188	44.2 632	46.1 678	50.4 930	52.3 201	56.4 934	15
16	15.3 385	16.7 795	18.4 179	19.3 689	20.4 651	21.7 930	23.5 418	26.2 962	28.8 453	31.9 999	34.2 672	39.2 524	41.3 081	45.9 249	47.8 581	52.2 450	54.0 968	58.3 244	
17	16.3 382	17.8 244	19.5 110	20.4 887	21.6 146	22.9 770	24.7 690	27.5 871	30.1 910	33.4 087	35.7 185	40.7 902	42.8 792	47.5 664	49.5 274	53.9 743	55.8 503	60.1 306	
18	17.3 379	18.8 679	20.6 014	21.6 049	22.7 595	24.1 555	25.9 894	28.8 693	31.5 264	34.8 053	37.1 565	42.3 124	44.4 338	49.1 894	51.1 775	55.6 829	57.5 824	61.9 142	
19	18.3 377	19.9 102	21.6 891	22.7 178	23.9 004	25.3 288	27.2 036	30.1 435	32.8 523	36.1 909	38.5 823	43.8 202	45.9 731	50.7 955	52.8 100	57.3 725	59.2 950	63.6 771	
20	19.3 374	20.9 514	22.7 745	23.8 277	25.0 375	26.4 976	28.4 120	31.4 104	34.1 696	37.5 662	39.9 968	45.3 147	47.4 985	52.3 860	54.4 263	59.0 446	60.9 895	65.4 207	20
21	20.3 372	21.9 915	23.8 578	24.9 348	26.1 711	27.6 620	29.6 151	32.6 706	35.4 789	38.9 322	41.4 011	46.7 970	49.0 108	53.9 620	56.0 276	60.7 003	62.6 673	67.1 465	
22	21.3 370	23.0 307	24.9 390	26.0 393	27.3 014	28.8 224	30.8 133	33.9 244	36.7 807	40.2 894	42.7 957	48.2 679	50.5 111	55.5 246	57.6 149	62.3 410	64.3 295	68.8 558	
23	22.3 369	24.0 689	26.0 184	27.1 413	28.4 288	29.9 792	32.0 069	35.1 725	38.0 756	41.6 384	44.1 813	49.7 282	52.0 002	57.0 746	59.1 891	63.9 675	65.9 771	70.5 496	
24	23.3 367	25.1 063	27.0 960	28.2 411	29.5 533	31.1 325	33.1 962	36.4 150	39.3 641	42.9 798	45.5 585	51.1 786	53.4 788	58.6 130	60.7 512	65.5 808	67.6 111	72.2 289	
25	24.3 366	26.1 430	28.1 719	29.3 388	30.6 752	32.2 825	34.3 816	37.6 525	40.6 465	44.3 141	46.9 279	52.6 197	54.9 475	60.1 403	62.3 017	67.1 818	69.2 323	73.8 945	25
26	25.3 365	27.1 789	29.2 463	30.4 346	31.7 946	33.4 295	35.5 632	38.8 851	41.9 232	45.6 417	48.2 899	54.0 520	56.4 069	61.6 573	63.8 415	68.7 710	70.8 415	75.5 474	
27	26.3 363	28.2 141	30.3 193	31.5 284	32.9 117	34.5 736	36.7 412	40.1 133	43.1 945	46.9 629	49.6 449	55.4 760	57.8 576	63.1 645	65.3 712	70.3 492	72.4 393	77.1 882	
28	27.3 362	29.2 486	31.3 909	32.6 205	34.0 266	35.7 150	37.9 159	41.3 371	44.4 608	48.2 782	50.9 934	56.8 923	59.3 000	64.6 624	66.8 912	71.9 170	74.0 263	78.8 175	
29	28.3 361	30.2 825	32.4 612	33.7 109	35.1 394	36.8 538	39.0 875	42.5 570	45.7 223	49.5 879	52.3 356	58.3 012	60.7 346	66.1 517	68.4 022	73.4 749	75.6 032	80.4 360	
30	29.3 360	31.3 159	33.5 302	34.7 997	36.2 502	37.9 902	40.2 560	43.7 730	46.9 792	50.8 922	53.6 720	59.7 031	62.1 619	67.6 326	69.9 045	75.0 234	77.1 704	82.0 441	30
32	31.3 359	33.3 809	35.6 649	36.9 730	38.4 663	40.2 563	42.5 847	46.1 943	49.4 804	53.4 858	56.3 281	62.4 872	64.9 955	70.5 712	72.8 848	78.0 942	80.2 777	85.2 316	
34	33.3 357	35.4 438	37.7 954	39.1 408	40.6 756	42.5 140	44.9 032	48.6 024	51.9 660	56.0 609	58.9 639	65.2 472	67.8 035	73.4 812	75.8 353	81.1 325	83.3 516	88.3 833	
36	35.3 356	37.5 049	39.9 220	41.3 036	42.8 788	44.7 641	47.2 122	50.9 985	54.4 373	58.6 192	61.5 812	67.9 852	70.5 881	76.3 650	78.7 585	84.1 412	86.3 948	91.5 024	
38	37.3 355	39.5 643	42.0 450	43.4 619	45.0 763	47.0 072	49.5 126	53.3 835	56.8 955	61.1 621	64.1 814	70.7 029	73.3 512	79.2 247	81.6 567	87.1 227	89.4 100	94.5 915	
40	39.3 353	41.6 222	44.1 649	45.6 160	47.2 685	49.2 438	51.8 051	55.7 585	59.3 617	63.6 907	66.7 660	73.4 020	76.0 946	82.0 623	84.5 318	90.0 791	92.3 993	97.6 530	40
42	41.3 352	43.6 786	46.2 817	47.7 662	49.4 560	51.4 746	54.0 902	58.1 240	61.7 768	66.2 062	69.3 360	76.0 838	78.8 197	84.8 793	87.3 854	93.0 122	95.3 645	100. 689	
44	43.3 352	45.7 336	48.3 957	49.9 129	51.6 389	53.6 998	56.3 685	60.4 809	64.2 015	68.7 095	71.8 926	78.7 495	81.5 277	87.6 773	90.2 192	95.9 236	98.3 073	103. 701	
46	45.3 351	47.7 874	50.5 071	52.0 562	53.8 177	55.9 199	58.6 405	62.8 296	66.6 165	71.2 014	74.4 365	81.4 003	84.2 198	90.4 574	93.0 343	98.8 148	101. 229	106. 690	
48	47.3 350	49.8 401	52.6 161	54.1 964	55.9 926	58.1 352	60.9 066	65.1 708	69.0 226	73.6 826	76.9 688	84.0 371	86.8 971	93.2 209	95.8 322	101. 687	104. 132	109. 659	
50	49.																		