## Wartości krytyczne rozkładu chi-kwadrat

 $X\sim\chi^2_{\nu}$  - X zmienna losowa o rozkładzie chi-kwadrat z liczbą stopni swobody  $\nu$ ,  $\alpha$  - poziom istotności,  $\chi^2_{\alpha,\,\nu}$  - wartość krytyczna - liczba taka, że  $P(X>\chi^2_{\alpha,\,\nu})=\alpha$ 

v \ a	0,995	0,990	0,975	0,950	0,900	0,100	0,050	0,025	0,010	0,005
1	$0.0^4393$	0,0002	0,0010	0,0039	0,0158	2,7055	3,8415	5,0239	6,6349	7,8794
2	0,0100	0,0201	0,0506	0,1026	0,2107	4,6052	5,9915	7,3778	9,2104	10,5965
3	0,0717	0,1148	0,2158	0,3518	0,5844	6,2514	7,8147	9,3484	11,3449	12,8381
4	0,2070	0,2971	0,4844	0,7107	1,0636	7,7794	9,4877	11,1433	13,2767	14,8602
5	0,4118	0,5543	0,8312	1,1455	1,6103	9,2363	11,0705	12,8325	15,0863	16,7496
6	0,6757	0,8721	1,2373	1,6354	2,2041	10,6446	12,5916	14,4494	16,8119	18,5475
7	0,9893	1,2390	1,6899	2,1673	2,8331	12,0170	14,0671	16,0128	18,4753	20,2777
8	1,3444	1,6465	2,1797	2,7326	3,4895	13,3616	15,5073	17,5345	20,0902	21,9549
9	1,7349	2,0879	2,7004	3,3251	4,1682	14,6837	16,9190	19,0228	21,6660	23,5893
10	2,1558	2,5582	3,2470	3,9403	4,8652	15,9872	18,3070	20,4832	23,2093	25,1881
11	2,6032	3,0535	3,8157	4,5748	5,5778	17,2750	19,6752	21,9200	24,7250	26,7569
12	3,0738	3,5706	4,4038	5,2260	6,3038	18,5493	21,0261	23,3367	26,2170	28,2997
13	3,5650	4,1069	5,0087	5,8919	7,0415	19,8119	22,3620	24,7356	27,6882	29,8193
14	4,0747	4,6604	5,6287	6,5706	7,7895	21,0641	23,6848	26,1189	29,1412	31,3194
15	4,6009	5,2294	6,2621	7,2609	8,5468	22,3071	24,9958	27,4884	30,5780	32,8015
16	5,1422	5,8122	6,9077	7,9616	9,3122	23,5418	26,2962	28,8453	31,9999	34,2671
17	5,6973	6,4077	7,5642	8,6718	10,0852	24,7690	27,5871	30,1910	33,4087	35,7184
18	6,2648	7,0149	8,2307	9,3904	10,8649	25,9894	28,8693	31,5264	34,8052	37,1564
19	6,8439	7,6327	8,9065	10,1170		27,2036	30,1435	32,8523	36,1908	38,5821
20	7,4338	8,2604	9,5908		12,4426	28,4120	31,4104	34,1696	37,5663	39,9969
21	8,0336	8,8972	10,2829	11,5913		29,6151	32,6706	35,4789	38,9322	41,4009
22	8,6427	9,5425	10,9823			30,8133	33,9245	36,7807	40,2894	42,7957
23	9,2604	10,1957	11,6885		14,8480	32,0069	35,1725	38,0756	41,6383	44,1814
24	9,8862	10,8563	12,4011	13,8484		33,1962	36,4150	39,3641	42,9798	45,5584
25	10,5196	11,5240	13,1197	14,6114		34,3816	37,6525	40,6465	44,3140	46,9280
26	11,1602	12,1982	13,8439	15,3792	17,2919	35,5632	38,8851	41,9231	45,6416	48,2898
27	11,8077	12,8785	14,5734			36,7412	40,1133	43,1945	46,9628	49,6450
28	12,4613	13,5647	15,3079			37,9159	41,3372	44,4608	48,2782	50,9936
29	13,1211	14,2564	16,0471	17,7084	19,7677	39,0875	42,5569	45,7223	49,5878	52,3355
30	13,7867	14,9535	16,7908	18,4927	20,5992	40,2560	43,7730	46,9792	50,8922	53,6719
31	14,4577	15,6555	17,5387	19,2806	21,4336	41,4217	44,9853	48,2319	52,1914	55,0025
32	15,1340	16,3622	18,2908	20,0719	22,2706	42,5847	46,1942	49,4804	53,4857	56,3280
33	15,8152	17,0735	19,0467	20,8665	23,1102	43,7452	47,3999	50,7251	54,7754	57,6483
34	16,5013	17,7891	19,8062	21,6643	23,9522	44,9032	48,6024	51,9660	56,0609	58,9637
35	17,1917	18,5089	20,5694	22,4650	24,7966	46,0588	49,8018	53,2033	57,3420	60,2746
36	17,8868	19,2326	21,3359	23,2686	25,6433	47,2122	50,9985	54,4373	58,6192	61,5811
37	18,5859	19,9603	22,1056	24,0749	26,4921	48,3634	52,1923	55,6680	59,8926	62,8832
38	19,2888	20,6914	22,8785	24,8839	27,3430	49,5126	53,3835	56,8955	61,1620	64,1812
39	19,9958	21,4261	23,6543	25,6954	28,1958	50,6598	54,5722	58,1201	62,4281	65,4753
40	20,7066		24,4331	26,5093	29,0505	51,8050	55,7585	59,3417	63,6908	66,7660
45	24,3110	25,9012	28,3662		33,3504	57,5053	61,6562	65,4101	69,9569	73,1660
50	27,9908	29,7067	32,3574	34,7642	37,6886	63,1671	67,5048	71,4202	76,1538	79,4898
55	31,7349	33,5705	36,3981	38,9581	42,0596	68,7962	73,3115	77,3804	82,2920	85,7491
60		37,4848				74,3970	79,0820	83,2977	88,3794	91,9518
65	39,3832			47,4496		79,9730	84,8206	89,1772	94,4220	98,1049
70	43,2753			51,7393		85,5270	90,5313	95,0231	100,4251	104,2148
75	47,2061	49,4751		56,0541	59,7946	91,0615	96,2167	100,8393	106,3929	110,2854
80		53,5400	57,1532			96,5782	101,8795	106,6285		116,3209
85	55,1695					102,0789	107,5217	112,3933		
90	59,1963	61,7540			73,2911	107,5650	113,1452	118,1359		
95		65,8983						123,8580		134,2466
100	67,3275	70,0650	74,2219	77,9294	82,3581	118,4980	124,3421	129,5613	135,8069	140,1697