Formulaire

Lois de probabilité

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} \times \exp\left(-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2\right) \quad \forall x \in \mathbb{R}$$

Probabilités conditionnelles

Evènement M = avoir la maladie M

Evènement T^+ = avoir un test positif

$$P(M|T^+) = \frac{P(T^+|M) \times P(M)}{P(T^+|M) \times P(M) + P(T^+|\bar{M}) \times P(\bar{M})}$$

$$RV^+ = \frac{P(T^+|M)}{P(T^+|\bar{M})}$$

$$RV^- = \frac{P(T^-|M)}{P(T^-|\bar{M})}$$

$$odds(M) = \frac{P(M)}{P(\bar{M})}$$

$$P(M) = \frac{odds(M)}{1 + odds(M)}$$

Tests statistiques

$$\chi^2 = \frac{(O_2 - E_2)^2}{\sum_{i=1}^{k} \nu_i}$$

$$\chi_a^2 = \frac{(O_2 - E_2)^2}{E_2} + \frac{(O_1 - E_1)^2}{E_1}$$

$$T = \frac{(M_1 - M_2) - 0}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Origine de la fluctuation	Somme des carrés des écarts
Entre colonnes	$\sum_{i=1}^{k} \frac{T_i^2}{n_i} - \frac{\left(\sum_{i=1}^{k} T_i\right)^2}{N}$
Résiduelle	$\sum_{i=1}^{k} \left(\sum_{j=1}^{n_i} x_{ij}^2\right) - \sum_{i=1}^{k} \frac{T_i^2}{n_i}$
Totale	$\sum_{i=1}^{k} \left(\sum_{j=1}^{n_i} x_{ij}^2\right) - \frac{\left(\sum_{i=1}^{k} T_i\right)^2}{N}$

Essais cliniques

$$n = \frac{2\sigma^2}{\delta^2}\left(z_{1-\alpha/2} + z_{1-\beta}\right)^2$$

$$n = \frac{\left(z_{1-\beta}\sqrt{\pi_E(1-\pi_E) + \pi_R(1-\pi_R)} + z_{1-\alpha/2}\sqrt{2\pi_0(1-\pi_0)}\right)^2}{\delta^2}$$

Epidémiologie

$$R(t) = 1 - e^{-\lambda t}$$

Fonction de répartition de la loi normale centrée réduite

Soit Z une variable aléatoire suivant une loi normale centrée réduite. Pour une valeur de z donnée, la table donne la probabilité $p = P(Z \leq z)$

z	0,00	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09
0,0	0,5000	0,5040	0,5080	0,5120	0,5160	0,5199	0,5239	0,5279	0,5319	0,5359
0,1	0,5398	0,5438	0,5478	0,5517	0,5557	0,5596	0,5636	0,5675	0,5714	0,5754
0,2	0,5793	0,5832	0,5871	0,5910	0,5948	0,5987	0,6026	0,6064	0,6103	0,6141
0,3	0,6179	0,6217	0,6255	0,6293	0,6331	0,6368	0,6406	0,6443	0,6480	0,6517
0,4	0,6554	0,6591	0,6628	0,6664	0,6700	0,6736	0,6772	0,6808	0,6844	0,6879
0,5	0,6915	0,6950	0,6985	0,7019	0,7054	0,7088	0,7123	0,7157	0,7190	0,7224
0,6	0,7258	0,7291	0,7324	0,7357	0,7389	0,7422	0,7454	0,7486	0,7518	0,7549
0,7	0,7580	0,7612	0,7642	0,7673	0,7704	0,7734	0,7764	0,7794	0,7823	0,7852
0,8	0,7881	0,7910	0,7939	0,7967	0,7996	0,8023	0,8051	0,8079	0,8106	0,8133
0,9	0,8159	0,8186	0,8212	0,8238	0,8264	0,8289	0,8315	0,8340	0,8365	0,8389
1,0	0,8413	0,8438	0,8461	0,8485	0,8508	0,8531	0,8554	0,8577	0,8599	0,8621
1,1	0,8643	0,8665	0,8686	0,8708	0,8729	0,8749	0,8770	0,8790	0,8810	0,8830
1,2	0,8849	0,8869	0,8888	0,8907	0,8925	0,8944	0,8962	0,8980	0,8997	0,9015
1,3	0,9032	0,9049	0,9066	0,9082	0,9099	0,9115	0,9131	0,9147	0,9162	0,9177
1,4	0,9192	0,9207	0,9222	0,9236	0,9251	0,9265	0,9279	0,9292	0,9306	0,9319
1,5	0,9332	0,9345	0,9357	0,9370	0,9382	0,9394	0,9406	0,9418	0,9430	0,9441
1,6	0,9452	0,9463	0,9474	0,9485	0,9495	0,9505	0,9515	0,9525	0,9535	0,9545
1,7	0,9554	0,9564	0,9573	0,9582	0,9591	0,9599	0,9608	0,9616	0,9625	0,9633
1,8	0,9641	0,9649	0,9656	0,9664	0,9671	0,9678	0,9686	0,9693	0,9700	0,9706
1,9	0,9713	0,9719	0,9726	0,9732	0,9738	0,9744	0,9750	0,9756	0,9762	0,9767
2,0	0,9773	0,9778	0,9783	0,9788	0,9793	0,9798	0,9803	0,9808	0,9812	0,9817
2,1	0,9821	0,9826	0,9830	0,9834	0,9838	0,9842	0,9846	0,9850	0,9854	0,9857
2,2	0,9861	0,9865	0,9868	0,9871	0,9875	0,9878	0,9881	0,9884	0,9887	0,9890
2,3	0,9893	0,9896	0,9898	0,9901	0,9904	0,9906	0,9909	0,9911	0,9913	0,9916
2,4	0,9918	0,9920	0,9922	0,9925	0,9927	0,9929	0,9931	0,9932	0,9934	0,9936
2,5	0,9938	0,9940	0,9941	0,9943	0,9945	0,9946	0,9948	0,9949	0,9951	0,9952
2,6	0,9953	0,9955	0,9956	0,9957	0,9959	0,9960	0,9961	0,9962	0,9963	0,9964
2,7	0,9965	0,9966	0,9967	0,9968	0,9969	0,9970	0,9971	0,9972	0,9973	0,9974
2,8	0,9974	0,9975	0,9976	0,9977	0,9977	0,9978	0,9979	0,9980	0,9980	0,9981
2,9	0,9981	0,9982	0,9983	0,9983	0,9984	0,9984	0,9985	0,9985	0,9986	0,9986
3,0	0,99865	0,99869	0,99874	0,99878	0,99882	0,99886	0,99889	0,99893	0,99896	0,99900
3,1	0,99903	0,99906	0,99910	0,99913	0,99916	0,99918	0,99921	0,99924	0,99926	0,99929
3,2	0,99931	0,99934	0,99936	0,99938	0,99940	0,99942	0,99944	0,99946	0,99948	0,99950
3,3	0,99952	0,99953	0,99955	0,99957	0,99958	0,99960	0,99961	0,99962	0,99964	0,99965
3,4	0,99966	0,99968	0,99969	0,99970	0,99971	0,99972	0,99973	0,99974	0,99975	0,99976
3,5	0,99977	0,99978	0,99978	0,99979	0,99980	0,99981	0,99981	0,99982	0,99983	0,99983
3,6	0,99984	0,99985	0,99985	0,99986	0,99986	0,99987	0,99987	0,99988	0,99988	0,99989
3,7	0,99989	0,99990	0,99990	0,99990	0,99991	0,99991	0,99992	0,99992	0,99992	0,99992
3,8	0,99993	0,99993	0,99993	0,99994	0,99994	0,99994	0,99994	0,99995	0,99995	0,99995
3,9	0,99995	0,99995	0,99996	0,99996	0,99996	0,99996	0,99996	0,99996	0,99997	0,99997
4,0	0,99997	0,99997	0,99997	0,99997	0,99997	0,99997	0,99998	0,99998	0,99998	0,99998

Loi normale centrée réduite

Soit Z une variable aléatoire suivant une loi normale centrée réduite. Pour une probabilité p donnée, la table donne la valeur z telle que $P(Z \leq z) = p$

p	0,000	0,001	0,002	0,003	0,004	0,005	0,006	0,007	0,008	0,009
0,50	0,0000	0,0025	0,0050	0,0075	0,0100	0,0125	0,0150	0,0175	0,0201	0,0226
0,51	0,0251	0,0276	0,0301	0,0326	0,0351	0,0376	0,0401	0,0426	0,0451	0,0476
0,52	0,0502	0,0527	0,0552	0,0577	0,0602	0,0627	0,0652	0,0677	0,0702	0,0728
0,53	0,0753	0,0778	0,0803	0,0828	0,0853	0,0878	0,0904	0,0929	0,0954	0,0979
0,54	0,1004	0,1030	0,1055	0,1080	0,1105	0,1130	0,1156	0,1181	0,1206	0,1231
0,55	0,1257	0,1282	0,1307	0,1332	0,1358	0,1383	0,1408	0,1434	0,1459	0,1484
0,56	0,1510	0,1535	0,1560	0,1586	0,1611	0,1637	0,1662	0,1687	0,1713	0,1738
0,57	0,1764	0,1789	0,1815	0,1840	0,1866	0,1891	0,1917	0,1942	0,1968	0,1993
0,58	0,2019	0,2045	0,2070	0,2096	0,2121	0,2147	0,2173	0,2198	0,2224	0,2250
0,59	0,2275	0,2301	0,2327	0,2353	0,2378	0,2404	0,2430	0,2456	0,2482	0,2508
0,60	0,2533	0,2559	0,2585	0,2611	0,2637	0,2663	0,2689	0,2715	0,2741	0,2767
0,61	0,2793	0,2819	0,2845	0,2871	0,2898	0,2924	0,2950	0,2976	0,3002	0,3029
0,62	0,3055	0,3081	0,3107	0,3134	0,3160	0,3186	0,3213	0,3239	0,3266	0,3292
0,63	0,3319	0,3345	0,3372	0,3398	0,3425	0,3451	0,3478	0,3505	0,3531	0,3558
0,64	0,3585	0,3611	0,3638	0,3665	0,3692	0,3719	0,3745	0,3772	0,3799	0,3826
0,65	0,3853	0,3880	0,3907	0,3934	0,3961	0,3989	0,4016	0,4043	0,4070	0,4097
0,66	0,4125	0,4152	0,4179	0,4207	0,4234	0,4261	0,4289	0,4316	0,4344	0,4372
0,67	0,4399	0,4427	0,4454	0,4482	0,4510	0,4538	0,4565	0,4593	0,4621	0,4649
0,68	0,4677	0,4705	0,4733	0,4761	0,4789	0,4817	0,4845	0,4874	0,4902	0,4930
0,69	0,4959	0,4987	0,5015	0,5044	0,5072	0,5101	0,5129	0,5158	0,5187	0,5215
0,70	0,5244	0,5273	0,5302	0,5330	0,5359	0,5388	0,5417	0,5446	0,5476	0,5505
0,71	0,5534	0,5563	0,5592	0,5622	0,5651	0,5681	0,5710	0,5740	0,5769	0,5799
0,72	0,5828	0,5858	0,5888	0,5918	0,5948	0,5978	0,6008	0,6038	0,6068	0,6098
0,73	0,6128	0,6158	0,6189	0,6219	0,6250	0,6280	0,6311	0,6341	0,6372	0,6403
0,74	0,6433	0,6464	0,6495	0,6526	0,6557	0,6588	0,6620	0,6651	0,6682	0,6713
0,75	0,6745	0,6776	0,6808	0,6840	0,6871	0,6903	0,6935	0,6967	0,6999	0,7031
0,76	0,7063	0,7095	0,7128	0,7160	0,7192	0,7225	0,7257	0,7290	0,7323	0,7356
0,77	0,7388	0,7421	0,7454	0,7488	0,7521	0,7554	0,7588	0,7621	0,7655	0,7688
0,78	0,7722	0,7756	0,7790	0,7824	0,7858	0,7892	0,7926	0,7961	0,7995	0,8030
0,79	0,8064	0,8099	0,8134	0,8169	0,8204	0,8239	0,8274	0,8310	0,8345	0,8381
0,80	0,8416	0,8452	0,8488	0,8524	0,8560	0,8596	0,8633	0,8669	0,8705	0,8742
0,81	0,8779	0,8816	0,8853	0,8890	0,8927	0,8965	0,9002	0,9040	0,9078	0,9116
0,82	0,9154	0,9192	0,9230	0,9269	0,9307	0,9346	0,9385	0,9424	0,9463	0,9502
0,83	0,9542	0,9581	0,9621	0,9661	0,9701	0,9741	0,9782	0,9822	0,9863	0,9904
0,84	0,9945	0,9986	1,0027	1,0069	1,0110	1,0152	1,0194	1,0237	1,0279	1,0322
0,85	1,0364	1,0407	1,0450	1,0494	1,0537	1,0581	1,0625	1,0669	1,0714	1,0758
0,86	1,0803	1,0848	1,0893	1,0939	1,0985	1,1031	1,1077	1,1123	1,1170	1,1217
0,87	1,1264	1,1311	1,1359	1,1407	1,1455	1,1503	1,1552	1,1601	1,1650	1,1700
0,88	1,1750	1,1800	1,1850	1,1901	1,1952	1,2004	1,2055	1,2107	1,2160	1,2212
0,89	1,2265	1,2319	1,2372	1,2426	1,2481	1,2536	1,2591	1,2646	1,2702	1,2759
0,90	1,2816	1,2873	1,2930	1,2988	1,3047	1,3106	1,3165	1,3225	1,3285	1,3346
0,91	1,3408	1,3469	1,3532	1,3595	1,3658	1,3722	1,3787	1,3852	1,3917	1,3984
0,92	1,4051	1,4118	1,4187	1,4255	1,4325	1,4395	1,4466	1,4538	1,4611	1,4684
0,93	1,4758	1,4833	1,4909	1,4985	1,5063	1,5141	1,5220	1,5301	1,5382	1,5464
0,94	1,5548	1,5632	1,5718	1,5805	1,5893	1,5982	1,6072	1,6164	1,6258	1,6352
0,95	1,6449	1,6546	1,6646	1,6747	1,6849	1,6954	1,7060	1,7169	1,7279	1,7392
0,96	1,7507	1,7624	1,7744	1,7866	1,7991	1,8119	1,8250	1,8384	1,8522	1,8663
0,97	1,8808	1,8957	1,9110	1,9268	1,9431	1,9600	1,9774	1,9954	2,0141	2,0335
0,98	2,0537	2,0749	2,0969	2,1201	2,1444	2,1701	2,1973	2,2262	2,2571	2,2904
0,99	2,3263	2,3656	2,4089	2,4573	2,5121	2,5758	2,6521	2,7478	2,8782	3,0902

Loi de Student

Soit T une variable aléatoire suivant une loi de Student à n degrés de liberté. Pour une probabilité p donnée, la table donne la valeur de t telle que $P(|T| > t) = p$

ddl	p	0,9	0,8	0,7	0,6	0,5	0,4	0,3	0,2	0,1	0,05	0,02	0,01	0,005	0,001
1		0,1584	0,3249	0,5095	0,7265	1,0000	1,3764	1,9626	3,0777	6,3138	12,7062	31,8205	63,6567	127,3213	636,6192
2		0,1421	0,2887	0,4447	0,6172	0,8165	1,0607	1,3862	1,8856	2,9200	4,3027	6,9646	9,9248	14,0890	31,5991
3		0,1366	0,2767	0,4242	0,5844	0,7649	0,9785	1,2498	1,6377	2,3534	3,1824	4,5407	5,8409	7,4533	12,9240
4		0,1338	0,2707	0,4142	0,5686	0,7407	0,9410	1,1896	1,5332	2,1318	2,7764	3,7469	4,6041	5,5976	8,6103
5		0,1322	0,2672	0,4082	0,5594	0,7267	0,9195	1,1558	1,4759	2,0150	2,5706	3,3649	4,0321	4,7733	6,8688
6		0,1311	0,2648	0,4043	0,5534	0,7176	0,9057	1,1342	1,4398	1,9432	2,4469	3,1427	3,7074	4,3168	5,9588
7		0,1303	0,2632	0,4015	0,5491	0,7111	0,8960	1,1192	1,4149	1,8946	2,3646	2,9980	3,4995	4,0293	5,4079
8		0,1297	0,2619	0,3995	0,5459	0,7064	0,8889	1,1081	1,3968	1,8595	2,3060	2,8965	3,3554	3,8325	5,0413
9		0,1293	0,2610	0,3979	0,5435	0,7027	0,8834	1,0997	1,3830	1,8331	2,2622	2,8214	3,2498	3,6897	4,7809
10		0,1289	0,2602	0,3966	0,5415	0,6998	0,8791	1,0931	1,3722	1,8125	2,2281	2,7638	3,1693	3,5814	4,5869
11		0,1286	0,2596	0,3956	0,5399	0,6974	0,8755	1,0877	1,3634	1,7959	2,2010	2,7181	3,1058	3,4966	4,4370
12		0,1283	0,2590	0,3947	0,5386	0,6955	0,8726	1,0832	1,3562	1,7823	2,1788	2,6810	3,0545	3,4284	4,3178
13		0,1281	0,2586	0,3940	0,5375	0,6938	0,8702	1,0795	1,3502	1,7709	2,1604	2,6503	3,0123	3,3725	4,2208
14		0,1280	0,2582	0,3933	0,5366	0,6924	0,8681	1,0763	1,3450	1,7613	2,1448	2,6245	2,9768	3,3257	4,1405
15		0,1278	0,2579	0,3928	0,5357	0,6912	0,8662	1,0735	1,3406	1,7531	2,1314	2,6025	2,9467	3,2860	4,0728
16		0,1277	0,2576	0,3923	0,5350	0,6901	0,8647	1,0711	1,3368	1,7459	2,1199	2,5835	2,9208	3,2520	4,0150
17		0,1276	0,2573	0,3919	0,5344	0,6892	0,8633	1,0690	1,3334	1,7396	2,1098	2,5669	2,8982	3,2224	3,9651
18		0,1274	0,2571	0,3915	0,5338	0,6884	0,8620	1,0672	1,3304	1,7341	2,1009	2,5524	2,8784	3,1966	3,9216
19		0,1274	0,2569	0,3912	0,5333	0,6876	0,8610	1,0655	1,3277	1,7291	2,0930	2,5395	2,8609	3,1737	3,8834
20		0,1273	0,2567	0,3909	0,5329	0,6870	0,8600	1,0640	1,3253	1,7247	2,0860	2,5280	2,8453	3,1534	3,8495
21		0,1272	0,2566	0,3906	0,5325	0,6864	0,8591	1,0627	1,3232	1,7207	2,0796	2,5176	2,8314	3,1352	3,8193
22		0,1271	0,2564	0,3904	0,5321	0,6858	0,8583	1,0614	1,3212	1,7171	2,0739	2,5083	2,8188	3,1188	3,7921
23		0,1271	0,2563	0,3902	0,5317	0,6853	0,8575	1,0603	1,3195	1,7139	2,0687	2,4999	2,8073	3,1040	3,7676
24		0,1270	0,2562	0,3900	0,5314	0,6848	0,8569	1,0593	1,3178	1,7109	2,0639	2,4922	2,7969	3,0905	3,7454
25		0,1269	0,2561	0,3898	0,5312	0,6844	0,8562	1,0584	1,3163	1,7081	2,0595	2,4851	2,7874	3,0782	3,7251
26		0,1269	0,2560	0,3896	0,5309	0,6840	0,8557	1,0575	1,3150	1,7056	2,0555	2,4786	2,7787	3,0669	3,7066
27		0,1268	0,2559	0,3894	0,5306	0,6837	0,8551	1,0567	1,3137	1,7033	2,0518	2,4727	2,7707	3,0565	3,6896
28		0,1268	0,2558	0,3893	0,5304	0,6834	0,8546	1,0560	1,3125	1,7011	2,0484	2,4671	2,7633	3,0469	3,6739
29		0,1268	0,2557	0,3892	0,5302	0,6830	0,8542	1,0553	1,3114	1,6991	2,0452	2,4620	2,7564	3,0380	3,6594
30		0,1267	0,2556	0,3890	0,5300	0,6828	0,8538	1,0547	1,3104	1,6973	2,0423	2,4573	2,7500	3,0298	3,6460
31		0,1267	0,2555	0,3889	0,5298	0,6825	0,8534	1,0541	1,3095	1,6955	2,0395	2,4528	2,7440	3,0221	3,6335
32		0,1267	0,2555	0,3888	0,5297	0,6822	0,8530	1,0535	1,3086	1,6939	2,0369	2,4487	2,7385	3,0149	3,6218
33		0,1266	0,2554	0,3887	0,5295	0,6820	0,8526	1,0530	1,3077	1,6924	2,0345	2,4448	2,7333	3,0082	3,6109
34		0,1266	0,2553	0,3886	0,5294	0,6818	0,8523	1,0525	1,3070	1,6909	2,0322	2,4411	2,7284	3,0020	3,6007
35		0,1266	0,2553	0,3885	0,5292	0,6816	0,8520	1,0520	1,3062	1,6896	2,0301	2,4377	2,7238	2,9960	3,5911
36		0,1266	0,2552	0,3884	0,5291	0,6814	0,8517	1,0516	1,3055	1,6883	2,0281	2,4345	2,7195	2,9905	3,5821
37		0,1265	0,2552	0,3883	0,5289	0,6812	0,8514	1,0512	1,3049	1,6871	2,0262	2,4314	2,7154	2,9852	3,5737
38		0,1265	0,2551	0,3882	0,5288	0,6810	0,8512	1,0508	1,3042	1,6860	2,0244	2,4286	2,7116	2,9803	3,5657
39		0,1265	0,2551	0,3882	0,5287	0,6808	0,8509	1,0504	1,3036	1,6849	2,0227	2,4258	2,7079	2,9756	3,5581
40		0,1265	0,2550	0,3881	0,5286	0,6807	0,8507	1,0500	1,3031	1,6839	2,0211	2,4233	2,7045	2,9712	3,5510
41		0,1264	0,2550	0,3880	0,5285	0,6805	0,8505	1,0497	1,3025	1,6829	2,0195	2,4208	2,7012	2,9670	3,5442
42		0,1264	0,2550	0,3880	0,5284	0,6804	0,8503	1,0494	1,3020	1,6820	2,0181	2,4185	2,6981	2,9630	3,5377
43		0,1264	0,2549	0,3879	0,5283	0,6802	0,8501	1,0491	1,3016	1,6811	2,0167	2,4163	2,6951	2,9592	3,5316
44		0,1264	0,2549	0,3878	0,5282	0,6801	0,8499	1,0488	1,3011	1,6802	2,0154	2,4141	2,6923	2,9555	3,5258
45		0,1264	0,2549	0,3878	0,5281	0,6800	0,8497	1,0485	1,3006	1,6794	2,0141	2,4121	2,6896	2,9521	3,5203
46		0,1264	0,2548	0,3877	0,5281	0,6799	0,8495	1,0483	1,3002	1,6787	2,0129	2,4102	2,6870	2,9488	3,5150
47		0,1263	0,2548	0,3877	0,5280	0,6797	0,8493	1,0480	1,2998	1,6779	2,0117	2,4083	2,6846	2,9456	3,5099
48		0,1263	0,2548	0,3876	0,5279	0,6796	0,8492	1,0478	1,2994	1,6772	2,0106	2,4066	2,6822	2,9426	3,5051
49		0,1263	0,2547	0,3876	0,5278	0,6795	0,8490	1,0475	1,2991	1,6766	2,0096	2,4049	2,6800	2,9397	3,5004
50		0,1263	0,2547	0,3875	0,5278	0,6794	0,8489	1,0473	1,2987	1,6759	2,0086	2,4033	2,6778	2,9370	3,4960
60		0,1262	0,2545	0,3872	0,5272	0,6786	0,8477	1,0455	1,2958	1,6706	2,0003	2,3901	2,6603	2,9146	3,4602
70		0,1261	0,2543	0,3869	0,5268	0,6780	0,8468	1,0442	1,2938	1,6669	1,9944	2,3808	2,6479	2,8987	3,4350
80		0,1261	0,2542	0,3867	0,5265	0,6776	0,8461	1,0432	1,2922	1,6641	1,9901	2,3739	2,6387	2,8870	3,4163
90		0,1260	0,2541	0,3866	0,5263	0,6772	0,8456	1,0424	1,2910	1,6620	1,9867	2,3685	2,6316	2,8779	3,4019
100		0,1260	0,2540	0,3864	0,5261	0,6770	0,8452	1,0418	1,2901	1,6602	1,9840	2,3642	2,6259	2,8707	3,3905
Inf		0,1257	0,2533	0,3853	0,5244	0,6745	0,8416	1,0364	1,2816	1,6449	1,9600	2,3263	2,5758	2,8070	3,2905

Fractiles de la loi du χ^2

Soit X une variable aléatoire suivant une loi du χ^2 à n degrés de liberté. Pour une probabilité p donnée, la table donne la valeur x telle que $P(X \leq x) = p$

ddl	p	0,005	0,010	0,025	0,050	0,100	0,250	0,500	0,750	0,900	0,950	0,975	0,990	0,999
1		0,0000	0,0002	0,0010	0,0039	0,0158	0,1015	0,4549	1,3233	2,7055	3,8415	5,0239	6,6349	10,8276
2		0,0100	0,0201	0,0506	0,1026	0,2107	0,5754	1,3863	2,7726	4,6052	5,9915	7,3778	9,2103	13,8155
3		0,0717	0,1148	0,2158	0,3518	0,5844	1,2125	2,3660	4,1083	6,2514	7,8147	9,3484	11,3449	16,2662
4		0,2070	0,2971	0,4844	0,7107	1,0636	1,9226	3,3567	5,3853	7,7794	9,4877	11,1433	13,2767	18,4668
5		0,4117	0,5543	0,8312	1,1455	1,6103	2,6746	4,3515	6,6257	9,2364	11,0705	12,8325	15,0863	20,5150
6		0,6757	0,8721	1,2373	1,6354	2,2041	3,4546	5,3481	7,8408	10,6446	12,5916	14,4494	16,8119	22,4577
7		0,9893	1,2390	1,6899	2,1673	2,8331	4,2549	6,3458	9,0371	12,0170	14,0671	16,0128	18,4753	24,3219
8		1,3444	1,6465	2,1797	2,7326	3,4895	5,0706	7,3441	10,2189	13,3616	15,5073	17,5345	20,0902	26,1245
9		1,7349	2,0879	2,7004	3,3251	4,1682	5,8988	8,3428	11,3888	14,6837	16,9190	19,0228	21,6660	27,8772
10		2,1559	2,5582	3,2470	3,9403	4,8652	6,7372	9,3418	12,5489	15,9872	18,3070	20,4832	23,2093	29,5883
11		2,6032	3,0535	3,8157	4,5748	5,5778	7,5841	10,3410	13,7007	17,2750	19,6751	21,9200	24,7250	31,2641
12		3,0738	3,5706	4,4038	5,2260	6,3038	8,4384	11,3403	14,8454	18,5493	21,0261	23,3367	26,2170	32,9095
13		3,5650	4,1069	5,0088	5,8919	7,0415	9,2991	12,3398	15,9839	19,8119	22,3620	24,7356	27,6882	34,5282
14		4,0747	4,6604	5,6287	6,5706	7,7895	10,1653	13,3393	17,1169	21,0641	23,6848	26,1189	29,1412	36,1233
15		4,6009	5,2293	6,2621	7,2609	8,5468	11,0365	14,3389	18,2451	22,3071	24,9958	27,4884	30,5779	37,6973
16		5,1422	5,8122	6,9077	7,9616	9,3122	11,9122	15,3385	19,3689	23,5418	26,2962	28,8454	31,9999	39,2524
17		5,6972	6,4078	7,5642	8,6718	10,0852	12,7919	16,3382	20,4887	24,7690	27,5871	30,1910	33,4087	40,7902
18		6,2648	7,0149	8,2307	9,3905	10,8649	13,6753	17,3379	21,6049	25,9894	28,8693	31,5264	34,8053	42,3124
19		6,8440	7,6327	8,9065	10,1170	11,6509	14,5620	18,3377	22,7178	27,2036	30,1435	32,8523	36,1909	43,8202
20		7,4338	8,2604	9,5908	10,8508	12,4426	15,4518	19,3374	23,8277	28,4120	31,4104	34,1696	37,5662	45,3147
21		8,0337	8,8972	10,2829	11,5913	13,2396	16,3444	20,3372	24,9348	29,6151	32,6706	35,4789	38,9322	46,7970
22		8,6427	9,5425	10,9823	12,3380	14,0415	17,2396	21,3370	26,0393	30,8133	33,9244	36,7807	40,2894	48,2679
23		9,2604	10,1957	11,6886	13,0905	14,8480	18,1373	22,3369	27,1413	32,0069	35,1725	38,0756	41,6384	49,7282
24		9,8862	10,8564	12,4012	13,8484	15,6587	19,0373	23,3367	28,2412	33,1962	36,4150	39,3641	42,9798	51,1786
25		10,5197	11,5240	13,1197	14,6114	16,4734	19,9393	24,3366	29,3389	34,3816	37,6525	40,6465	44,3141	52,6197
26		11,1602	12,1981	13,8439	15,3792	17,2919	20,8434	25,3365	30,4346	35,5632	38,8851	41,9232	45,6417	54,0520
27		11,8076	12,8785	14,5734	16,1514	18,1139	21,7494	26,3363	31,5284	36,7412	40,1133	43,1945	46,9629	55,4760
28		12,4613	13,5647	15,3079	16,9279	18,9392	22,6572	27,3362	32,6205	37,9159	41,3371	44,4608	48,2782	56,8923
29		13,1211	14,2565	16,0471	17,7084	19,7677	23,5666	28,3361	33,7109	39,0875	42,5570	45,7223	49,5879	58,3012
30		13,7867	14,9535	16,7908	18,4927	20,5992	24,4776	29,3360	34,7997	40,2560	43,7730	46,9792	50,8922	59,7031
40		20,7065	22,1643	24,4330	26,5093	29,0505	33,6603	39,3353	45,6160	51,8051	55,7585	59,3417	63,6907	73,4020
50		27,9907	29,7067	32,3574	34,7643	37,6886	42,9421	49,3349	56,3336	63,1671	67,5048	71,4202	76,1539	86,6608
60		35,5345	37,4849	40,4817	43,1880	46,4589	52,2938	59,3347	66,9815	74,3970	79,0819	83,2977	88,3794	99,6072
70		43,2752	45,4417	48,7576	51,7393	55,3289	61,6983	69,3345	77,5767	85,5270	90,5312	95,0232	100,4252	112,3169
80		51,1719	53,5401	57,1532	60,3915	64,2778	71,1445	79,3343	88,1303	96,5782	101,8795	106,6286	112,3288	124,8392
90		59,1963	61,7541	65,6466	69,1260	73,2911	80,6247	89,3342	98,6499	107,5650	113,1453	118,1359	124,1163	137,2084
100		67,3276	70,0649	74,2219	77,9295	82,3581	90,1332	99,3341	109,1412	118,4980	124,3421	129,5612	135,8067	149,4493

Loi de Fisher-Snedecor

Soit F une variable aléatoire suivant une loi de Fisher-Snedecor à ν_1 et ν_2 degrés de liberté. Pour une probabilité p donnée, la table donne la valeur de f telle que $P(F > f) = 0{,}05$

ν_2	ν_1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1		161,448	199,500	215,707	224,583	230,162	233,986	236,768	238,883	240,543	241,882	242,983	243,906	244,690	245,364
2		18,513	19,000	19,164	19,247	19,296	19,330	19,353	19,371	19,385	19,396	19,405	19,413	19,419	19,424
3		10,128	9,552	9,277	9,117	9,013	8,941	8,887	8,845	8,812	8,786	8,763	8,745	8,729	8,715
4		7,709	6,944	6,591	6,388	6,256	6,163	6,094	6,041	5,999	5,964	5,936	5,912	5,891	5,873
5		6,608	5,786	5,409	5,192	5,050	4,950	4,876	4,818	4,772	4,735	4,704	4,678	4,655	4,636
6		5,987	5,143	4,757	4,534	4,387	4,284	4,207	4,147	4,099	4,060	4,027	4,000	3,976	3,956
7		5,591	4,737	4,347	4,120	3,972	3,866	3,787	3,726	3,677	3,637	3,603	3,575	3,550	3,529
8		5,318	4,459	4,066	3,838	3,687	3,581	3,500	3,438	3,388	3,347	3,313	3,284	3,259	3,237
9		5,117	4,256	3,863	3,633	3,482	3,374	3,293	3,230	3,179	3,137	3,102	3,073	3,048	3,025
10		4,965	4,103	3,708	3,478	3,326	3,217	3,135	3,072	3,020	2,978	2,943	2,913	2,887	2,865
11		4,844	3,982	3,587	3,357	3,204	3,095	3,012	2,948	2,896	2,854	2,818	2,788	2,761	2,739
12		4,747	3,885	3,490	3,259	3,106	2,996	2,913	2,849	2,796	2,753	2,717	2,687	2,660	2,637
13		4,667	3,806	3,411	3,179	3,025	2,915	2,832	2,767	2,714	2,671	2,635	2,604	2,577	2,554
14		4,600	3,739	3,344	3,112	2,958	2,848	2,764	2,699	2,646	2,602	2,565	2,534	2,507	2,484
15		4,543	3,682	3,287	3,056	2,901	2,790	2,707	2,641	2,588	2,544	2,507	2,475	2,448	2,424
16		4,494	3,634	3,239	3,007	2,852	2,741	2,657	2,591	2,538	2,494	2,456	2,425	2,397	2,373
17		4,451	3,592	3,197	2,965	2,810	2,699	2,614	2,548	2,494	2,450	2,413	2,381	2,353	2,329
18		4,414	3,555	3,160	2,928	2,773	2,661	2,577	2,510	2,456	2,412	2,374	2,342	2,314	2,290
19		4,381	3,522	3,127	2,895	2,740	2,628	2,544	2,477	2,423	2,378	2,340	2,308	2,280	2,256
20		4,351	3,493	3,098	2,866	2,711	2,599	2,514	2,447	2,393	2,348	2,310	2,278	2,250	2,225
21		4,325	3,467	3,072	2,840	2,685	2,573	2,488	2,420	2,366	2,321	2,283	2,250	2,222	2,197
22		4,301	3,443	3,049	2,817	2,661	2,549	2,464	2,397	2,342	2,297	2,259	2,226	2,198	2,173
23		4,279	3,422	3,028	2,796	2,640	2,528	2,442	2,375	2,320	2,275	2,236	2,204	2,175	2,150
24		4,260	3,403	3,009	2,776	2,621	2,508	2,423	2,355	2,300	2,255	2,216	2,183	2,155	2,130
25		4,242	3,385	2,991	2,759	2,603	2,490	2,405	2,337	2,282	2,236	2,198	2,165	2,136	2,111
26		4,225	3,369	2,975	2,743	2,587	2,474	2,388	2,321	2,265	2,220	2,181	2,148	2,119	2,094
27		4,210	3,354	2,960	2,728	2,572	2,459	2,373	2,305	2,250	2,204	2,166	2,132	2,103	2,078
28		4,196	3,340	2,947	2,714	2,558	2,445	2,359	2,291	2,236	2,190	2,151	2,118	2,089	2,064
29		4,183	3,328	2,934	2,701	2,545	2,432	2,346	2,278	2,223	2,177	2,138	2,104	2,075	2,050
30		4,171	3,316	2,922	2,690	2,534	2,421	2,334	2,266	2,211	2,165	2,126	2,092	2,063	2,037
31		4,160	3,305	2,911	2,679	2,523	2,409	2,323	2,255	2,199	2,153	2,114	2,080	2,051	2,026
32		4,149	3,295	2,901	2,668	2,512	2,399	2,313	2,244	2,189	2,142	2,103	2,070	2,040	2,015
33		4,139	3,285	2,892	2,659	2,503	2,389	2,303	2,235	2,179	2,133	2,093	2,060	2,030	2,004
34		4,130	3,276	2,883	2,650	2,494	2,380	2,294	2,225	2,170	2,123	2,084	2,050	2,021	1,995
35		4,121	3,267	2,874	2,641	2,485	2,372	2,285	2,217	2,161	2,114	2,075	2,041	2,012	1,986
36		4,113	3,259	2,866	2,634	2,477	2,364	2,277	2,209	2,153	2,106	2,067	2,033	2,003	1,977
37		4,105	3,252	2,859	2,626	2,470	2,356	2,270	2,201	2,145	2,098	2,059	2,025	1,995	1,969
38		4,098	3,245	2,852	2,619	2,463	2,349	2,262	2,194	2,138	2,091	2,051	2,017	1,988	1,962
39		4,091	3,238	2,845	2,612	2,456	2,342	2,255	2,187	2,131	2,084	2,044	2,010	1,981	1,954
40		4,085	3,232	2,839	2,606	2,449	2,336	2,249	2,180	2,124	2,077	2,038	2,003	1,974	1,948
50		4,034	3,183	2,790	2,557	2,400	2,286	2,199	2,130	2,073	2,026	1,986	1,952	1,921	1,895
60		4,001	3,150	2,758	2,525	2,368	2,254	2,167	2,097	2,040	1,993	1,952	1,917	1,887	1,860
70		3,978	3,128	2,736	2,503	2,346	2,231	2,143	2,074	2,017	1,969	1,928	1,893	1,863	1,836
80		3,960	3,111	2,719	2,486	2,329	2,214	2,126	2,056	1,999	1,951	1,910	1,875	1,845	1,817
90		3,947	3,098	2,706	2,473	2,316	2,201	2,113	2,043	1,986	1,938	1,897	1,861	1,830	1,803
100		3,936	3,087	2,696	2,463	2,305	2,191	2,103	2,032	1,975	1,927	1,886	1,850	1,819	1,792
200		3,888	3,041	2,650	2,417	2,259	2,144	2,056	1,985	1,927	1,878	1,837	1,801	1,769	1,742
500		3,860	3,014	2,623	2,390	2,232	2,117	2,028	1,957	1,899	1,850	1,808	1,772	1,740	1,712
Inf		3,841	2,996	2,605	2,372	2,214	2,099	2,010	1,938	1,880	1,831	1,789	1,752	1,720	1,692

Loi de Fisher-Snedecor

Soit F une variable aléatoire suivant une loi de Fisher-Snedecor à ν_1 et ν_2 degrés de liberté. Pour une probabilité p donnée, la table donne la valeur de f telle que $P(F > f) = 0{,}05$

ν_2 \ ν_1	16	18	20	22	24	26	28	30	40	60	80	1 000
1	246,464	247,323	248,013	248,579	249,052	249,453	249,797	250,095	251,143	252,196	252,724	254,187
2	19,433	19,440	19,446	19,450	19,454	19,457	19,460	19,462	19,471	19,479	19,483	19,495
3	8,692	8,675	8,660	8,648	8,639	8,630	8,623	8,617	8,594	8,572	8,561	8,529
4	5,844	5,821	5,803	5,787	5,774	5,763	5,754	5,746	5,717	5,688	5,673	5,632
5	4,604	4,579	4,558	4,541	4,527	4,515	4,505	4,496	4,464	4,431	4,415	4,369
6	3,922	3,896	3,874	3,856	3,841	3,829	3,818	3,808	3,774	3,740	3,722	3,673
7	3,494	3,467	3,445	3,426	3,410	3,397	3,386	3,376	3,340	3,304	3,286	3,234
8	3,202	3,173	3,150	3,131	3,115	3,102	3,090	3,079	3,043	3,005	2,986	2,932
9	2,989	2,960	2,936	2,917	2,900	2,886	2,874	2,864	2,826	2,787	2,768	2,712
10	2,828	2,798	2,774	2,754	2,737	2,723	2,710	2,700	2,661	2,621	2,601	2,543
11	2,701	2,671	2,646	2,626	2,609	2,594	2,582	2,570	2,531	2,490	2,469	2,410
12	2,599	2,568	2,544	2,523	2,505	2,491	2,478	2,466	2,426	2,384	2,363	2,302
13	2,515	2,484	2,459	2,438	2,420	2,405	2,392	2,380	2,339	2,297	2,275	2,212
14	2,445	2,413	2,388	2,367	2,349	2,333	2,320	2,308	2,266	2,223	2,201	2,136
15	2,385	2,353	2,328	2,306	2,288	2,272	2,259	2,247	2,204	2,160	2,137	2,072
16	2,333	2,302	2,276	2,254	2,235	2,220	2,206	2,194	2,151	2,106	2,083	2,016
17	2,289	2,257	2,230	2,208	2,190	2,174	2,160	2,148	2,104	2,058	2,035	1,967
18	2,250	2,217	2,191	2,168	2,150	2,134	2,119	2,107	2,063	2,017	1,993	1,923
19	2,215	2,182	2,155	2,133	2,114	2,098	2,084	2,071	2,026	1,980	1,955	1,884
20	2,184	2,151	2,124	2,102	2,082	2,066	2,052	2,039	1,994	1,946	1,922	1,850
21	2,156	2,123	2,096	2,073	2,054	2,037	2,023	2,010	1,965	1,916	1,891	1,818
22	2,131	2,098	2,071	2,048	2,028	2,012	1,997	1,984	1,938	1,889	1,864	1,790
23	2,109	2,075	2,048	2,025	2,005	1,988	1,973	1,961	1,914	1,865	1,839	1,764
24	2,088	2,054	2,027	2,003	1,984	1,967	1,952	1,939	1,892	1,842	1,816	1,740
25	2,069	2,035	2,007	1,984	1,964	1,947	1,932	1,919	1,872	1,822	1,796	1,718
26	2,052	2,018	1,990	1,966	1,946	1,929	1,914	1,901	1,853	1,803	1,776	1,698
27	2,036	2,002	1,974	1,950	1,930	1,913	1,898	1,884	1,836	1,785	1,758	1,679
28	2,021	1,987	1,959	1,935	1,915	1,897	1,882	1,869	1,820	1,769	1,742	1,662
29	2,007	1,973	1,945	1,921	1,901	1,883	1,868	1,854	1,806	1,754	1,726	1,645
30	1,995	1,960	1,932	1,908	1,887	1,870	1,854	1,841	1,792	1,740	1,712	1,630
31	1,983	1,948	1,920	1,896	1,875	1,857	1,842	1,828	1,779	1,726	1,699	1,616
32	1,972	1,937	1,908	1,884	1,864	1,846	1,830	1,817	1,767	1,714	1,686	1,602
33	1,961	1,926	1,898	1,873	1,853	1,835	1,819	1,806	1,756	1,702	1,674	1,589
34	1,952	1,917	1,888	1,863	1,843	1,825	1,809	1,795	1,745	1,691	1,663	1,577
35	1,942	1,907	1,878	1,854	1,833	1,815	1,799	1,786	1,735	1,681	1,652	1,566
36	1,934	1,899	1,870	1,845	1,824	1,806	1,790	1,776	1,726	1,671	1,643	1,555
37	1,926	1,890	1,861	1,837	1,816	1,798	1,782	1,768	1,717	1,662	1,633	1,545
38	1,918	1,883	1,853	1,829	1,808	1,790	1,774	1,760	1,708	1,653	1,624	1,536
39	1,911	1,875	1,846	1,821	1,800	1,782	1,766	1,752	1,700	1,645	1,616	1,526
40	1,904	1,868	1,839	1,814	1,793	1,775	1,759	1,744	1,693	1,637	1,608	1,517
50	1,850	1,814	1,784	1,759	1,737	1,718	1,702	1,687	1,634	1,576	1,544	1,448
60	1,815	1,778	1,748	1,722	1,700	1,681	1,664	1,649	1,594	1,534	1,502	1,399
70	1,790	1,753	1,722	1,696	1,674	1,654	1,637	1,622	1,566	1,505	1,471	1,364
80	1,772	1,734	1,703	1,677	1,654	1,634	1,617	1,602	1,545	1,482	1,448	1,336
90	1,757	1,720	1,688	1,662	1,639	1,619	1,601	1,586	1,528	1,465	1,429	1,314
100	1,746	1,708	1,676	1,650	1,627	1,607	1,589	1,573	1,515	1,450	1,415	1,296
200	1,694	1,656	1,623	1,596	1,572	1,551	1,533	1,516	1,455	1,386	1,346	1,205
500	1,664	1,625	1,592	1,563	1,539	1,518	1,499	1,482	1,419	1,345	1,303	1,138
Inf	1,644	1,604	1,571	1,542	1,517	1,496	1,476	1,459	1,394	1,318	1,273	1,075