

# Annexe C

## Tables numériques

Ces tables ont été établies à l'aide du logiciel *Mathematica*.

- Loi normale
- Loi du khi-deux
- Loi de STUDENT
- Loi de FISHER-SNEDECOR

## C.1 Loi normale

**Fonction de répartition de la loi normale réduite :**  $\Phi(x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^x \exp\left(-\frac{t^2}{2}\right) dt$

x	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.	0.5	0.50399	0.50798	0.51197	0.51595	0.51994	0.52392	0.52790	0.53188	0.53586
0.1	0.53983	0.54380	0.54776	0.55172	0.55567	0.55962	0.56356	0.56749	0.57142	0.57535
0.2	0.57926	0.58317	0.58706	0.59095	0.59483	0.59871	0.60257	0.60642	0.61026	0.61409
0.3	0.61791	0.62172	0.62552	0.62930	0.63307	0.63683	0.64058	0.64431	0.64803	0.65173
0.4	0.65542	0.65910	0.66276	0.66640	0.67003	0.67364	0.67724	0.68082	0.68439	0.68793
0.5	0.69146	0.69497	0.69847	0.70194	0.70540	0.70884	0.71226	0.71566	0.71904	0.72240
0.6	0.72575	0.72907	0.73237	0.73565	0.73891	0.74215	0.74537	0.74857	0.75175	0.75490
0.7	0.75804	0.76115	0.76424	0.76730	0.77035	0.77337	0.77637	0.77935	0.78230	0.78524
0.8	0.78814	0.79103	0.79389	0.79673	0.79955	0.80234	0.80511	0.80785	0.81057	0.81327
0.9	0.81594	0.81859	0.82121	0.82381	0.82639	0.82894	0.83147	0.83398	0.83646	0.83891
1.	0.84134	0.84375	0.84614	0.84849	0.85083	0.85314	0.85543	0.85769	0.85993	0.86214
1.1	0.86433	0.86650	0.86864	0.87076	0.87286	0.87493	0.87698	0.87900	0.88100	0.88298
1.2	0.88493	0.88686	0.88877	0.89065	0.89251	0.89435	0.89617	0.89796	0.89973	0.90147
1.3	0.90320	0.90490	0.90658	0.90824	0.90988	0.91149	0.91309	0.91466	0.91621	0.91774
1.4	0.91924	0.92073	0.92220	0.92364	0.92507	0.92647	0.92785	0.92922	0.93056	0.93189
1.5	0.93319	0.93448	0.93574	0.93699	0.93822	0.93943	0.94062	0.94179	0.94295	0.94408
1.6	0.94520	0.94630	0.94738	0.94845	0.94950	0.95053	0.95154	0.95254	0.95352	0.95449
1.7	0.95543	0.95637	0.95728	0.95818	0.95907	0.95994	0.96080	0.96164	0.96246	0.96327
1.8	0.96407	0.96485	0.96562	0.96638	0.96712	0.96784	0.96856	0.96926	0.96995	0.97062
1.9	0.97128	0.97193	0.97257	0.97320	0.97381	0.97441	0.97500	0.97558	0.97615	0.97670
2.	0.97725	0.97778	0.97831	0.97882	0.97932	0.97982	0.98030	0.98077	0.98124	0.98169
2.1	0.98214	0.98257	0.98300	0.98341	0.98382	0.98422	0.98461	0.98500	0.98537	0.98574
2.2	0.98610	0.98645	0.98679	0.98713	0.98745	0.98778	0.98809	0.98840	0.98870	0.98899
2.3	0.98928	0.98956	0.98983	0.99010	0.99036	0.99061	0.99086	0.99111	0.99134	0.99158
2.4	0.99180	0.99202	0.99224	0.99245	0.99266	0.99286	0.99305	0.99324	0.99343	0.99361
2.5	0.99379	0.99396	0.99413	0.99430	0.99446	0.99461	0.99477	0.99492	0.99506	0.99520
2.6	0.99534	0.99547	0.99560	0.99573	0.99585	0.99598	0.99609	0.99621	0.99632	0.99643
2.7	0.99653	0.99664	0.99674	0.99683	0.99693	0.99702	0.99711	0.99720	0.99728	0.99736
2.8	0.99744	0.99752	0.99760	0.99767	0.99774	0.99781	0.99788	0.99795	0.99801	0.99807
2.9	0.99813	0.99819	0.99825	0.99831	0.99836	0.99841	0.99846	0.99851	0.99856	0.99861

Table de 1 –  $\Phi(x)$  pour les grandes valeurs de  $x$

x	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
3.	{1.35 ; 3}	{9.68 ; 4}	{6.87 ; 4}	{4.83 ; 4}	{3.37 ; 4}	{2.33 ; 4}	{1.59 ; 4}	{1.08 ; 4}	{7.23 ; 5}	{4.81 ; 5}
4.	{3.17 ; 5}	{2.07 ; 5}	{1.33 ; 5}	{8.54 ; 6}	{5.41 ; 6}	{3.40 ; 6}	{2.11 ; 6}	{1.30 ; 6}	{7.93 ; 7}	{4.79 ; 7}
5.	{2.87 ; 7}	{1.70 ; 7}	{9.96 ; 8}	{5.79 ; 8}	{3.33 ; 8}	{1.90 ; 8}	{1.07 ; 8}	{5.99 ; 9}	{3.32 ; 9}	{1.82 ; 9}

N.B. La notation {m;k} signifie  $m \cdot 10^{-k}$ .

**Densité de la loi normale réduite :**  $\varphi(x) = \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{t^2}{2}\right)$

x	0.	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.	0.39894	0.39892	0.39886	0.39876	0.39862	0.39844	0.39822	0.39797	0.39767	0.39733
0.1	0.39695	0.39654	0.39608	0.39559	0.39505	0.39448	0.39387	0.39322	0.39253	0.39181
0.2	0.39104	0.39024	0.38940	0.38853	0.38762	0.38667	0.38568	0.38466	0.38361	0.38251
0.3	0.38139	0.38023	0.37903	0.37780	0.37654	0.37524	0.37391	0.37255	0.37115	0.36973
0.4	0.36827	0.36678	0.36526	0.36371	0.36213	0.36053	0.35889	0.35723	0.35553	0.35381
0.5	0.35207	0.35029	0.34849	0.34667	0.34482	0.34294	0.34105	0.33912	0.33718	0.33521
0.6	0.33322	0.33121	0.32918	0.32713	0.32506	0.32297	0.32086	0.31874	0.31659	0.31443
0.7	0.31225	0.31006	0.30785	0.30563	0.30339	0.30114	0.29887	0.29659	0.29431	0.29200
0.8	0.28969	0.28737	0.28504	0.28269	0.28034	0.27798	0.27562	0.27324	0.27086	0.26848
0.9	0.26609	0.26369	0.26129	0.25888	0.25647	0.25406	0.25164	0.24923	0.24681	0.24439
1.	0.24197	0.23955	0.23713	0.23471	0.23230	0.22988	0.22747	0.22506	0.22265	0.22025
1.1	0.21785	0.21546	0.21307	0.21069	0.20831	0.20594	0.20357	0.20121	0.19886	0.19652
1.2	0.19419	0.19186	0.18954	0.18724	0.18494	0.18265	0.18037	0.17810	0.17585	0.17360
1.3	0.17137	0.16915	0.16694	0.16474	0.16256	0.16038	0.15822	0.15608	0.15395	0.15183
1.4	0.14973	0.14764	0.14556	0.14350	0.14146	0.13943	0.13742	0.13542	0.13344	0.13147
1.5	0.12952	0.12758	0.12566	0.12376	0.12188	0.12001	0.11816	0.11632	0.11450	0.11270
1.6	0.11092	0.10915	0.10741	0.10567	0.10396	0.10226	0.10059	0.09893	0.09728	0.09566
1.7	0.09405	0.09246	0.09089	0.08933	0.08780	0.08628	0.08478	0.08329	0.08183	0.08038
1.8	0.07895	0.07754	0.07614	0.07477	0.07341	0.07206	0.07074	0.06943	0.06814	0.06687
1.9	0.06562	0.06438	0.06316	0.06195	0.06077	0.05959	0.05844	0.05730	0.05618	0.05508
2.	0.05399	0.05292	0.05186	0.05082	0.04980	0.04879	0.04780	0.04682	0.04586	0.04491
2.1	0.04398	0.04307	0.04217	0.04128	0.04041	0.03955	0.03871	0.03788	0.03706	0.03626
2.2	0.03547	0.03470	0.03394	0.03319	0.03246	0.03174	0.03103	0.03034	0.02965	0.02898
2.3	0.02833	0.02768	0.02705	0.02643	0.02582	0.02522	0.02463	0.02406	0.02349	0.02294
2.4	0.02239	0.02186	0.02134	0.02083	0.02033	0.01984	0.01936	0.01888	0.01842	0.01797
2.5	0.01753	0.01709	0.01667	0.01625	0.01585	0.01545	0.01506	0.01468	0.01431	0.01394
2.6	0.01358	0.01323	0.01289	0.01256	0.01223	0.01191	0.01160	0.01130	0.01100	0.01071
2.7	0.01042	0.01014	0.00987	0.00961	0.00935	0.00909	0.00885	0.00861	0.00837	0.00814
2.8	0.00792	0.00770	0.00748	0.00727	0.00707	0.00687	0.00668	0.00649	0.00631	0.00613
2.9	0.00595	0.00578	0.00562	0.00545	0.00530	0.00514	0.00499	0.00485	0.00470	0.00457

Table de  $\varphi(x)$  pour les grandes valeurs de  $x$ 

x	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
3.	{4.43 ; 3}	{3.27 ; 3}	{2.38 ; 3}	{1.72 ; 3}	{1.23 ; 3}	{8.73 ; 4}	{6.12 ; 4}	{4.25 ; 4}	{2.92 ; 4}	{1.99 ; 4}
4.	{1.34 ; 4}	{8.93 ; 5}	{5.89 ; 5}	{3.85 ; 5}	{2.49 ; 5}	{1.60 ; 5}	{1.01 ; 5}	{6.37 ; 6}	{3.96 ; 6}	{2.44 ; 6}
5.	{1.49 ; 6}	{8.97 ; 7}	{5.36 ; 7}	{3.17 ; 7}	{1.86 ; 7}	{1.08 ; 7}	{6.18 ; 8}	{3.51 ; 8}	{1.98 ; 8}	{1.10 ; 8}

N.B. La notation {m;k} signifie  $m \cdot 10^{-k}$ .

## C.2 Loi du khi-deux

### Fractiles de la loi du khi-deux

$\nu \backslash p$	0.0005	0.001	0.005	0.01	0.025	0.05	0.1	0.5
1	0.000	0.000	0.000	0.000	0.001	0.004	0.016	0.455
2	0.001	0.002	0.010	0.020	0.051	0.103	0.211	1.386
3	0.015	0.024	0.072	0.115	0.216	0.352	0.584	2.366
4	0.064	0.091	0.207	0.297	0.484	0.711	1.064	3.357
5	0.158	0.210	0.412	0.554	0.831	1.145	1.610	4.351
6	0.299	0.381	0.676	0.872	1.237	1.635	2.204	5.348
7	0.485	0.598	0.989	1.239	1.690	2.167	2.833	6.346
8	0.710	0.857	1.344	1.646	2.180	2.733	3.490	7.344
9	0.972	1.152	1.735	2.088	2.700	3.325	4.168	8.343
10	1.265	1.479	2.156	2.558	3.247	3.940	4.865	9.342
11	1.587	1.834	2.603	3.053	3.816	4.575	5.578	10.341
12	1.934	2.214	3.074	3.571	4.404	5.226	6.304	11.340
13	2.305	2.617	3.565	4.107	5.009	5.892	7.042	12.340
14	2.697	3.041	4.075	4.660	5.629	6.571	7.790	13.339
15	3.108	3.483	4.601	5.229	6.262	7.261	8.547	14.339
16	3.536	3.942	5.142	5.812	6.908	7.962	9.312	15.338
17	3.980	4.416	5.697	6.408	7.564	8.672	10.085	16.338
18	4.439	4.905	6.265	7.015	8.231	9.390	10.865	17.338
19	4.912	5.407	6.844	7.633	8.907	10.117	11.651	18.338
20	5.398	5.921	7.434	8.260	9.591	10.851	12.443	19.337
21	5.896	6.447	8.034	8.897	10.283	11.591	13.240	20.337
22	6.404	6.983	8.643	9.542	10.982	12.338	14.041	21.337
23	6.924	7.529	9.260	10.196	11.689	13.091	14.848	22.337
24	7.453	8.085	9.886	10.856	12.401	13.848	15.659	23.337
25	7.991	8.649	10.520	11.524	13.120	14.611	16.473	24.337
26	8.538	9.222	11.160	12.198	13.844	15.379	17.292	25.336
27	9.093	9.803	11.808	12.879	14.573	16.151	18.114	26.336
28	9.656	10.391	12.461	13.565	15.308	16.928	18.939	27.336
29	10.227	10.986	13.121	14.256	16.047	17.708	19.768	28.336
30	10.804	11.588	13.787	14.953	16.791	18.493	20.599	29.336

Le fractile  $t$  est tel que  $\mathbb{P}(\chi_\nu^2 < t) = p$ .

Lorsque le nombre de degrés de liberté,  $\nu$ , est supérieur à 30 on peut admettre que la variable aléatoire  $\sqrt{2}\chi_\nu^2 - \sqrt{2\nu - 1}$  suit approximativement la loi normale réduite.

**Fractiles de la loi du khi-deux (suite)**

$\nu \backslash p$	0.5	0.9	0.95	0.975	0.99	0.995	0.999	0.9995
1	0.455	2.706	3.841	5.024	6.635	7.879	10.828	12.116
2	1.386	4.605	5.991	7.378	9.210	10.597	13.816	15.202
3	2.366	6.251	7.815	9.348	11.345	12.838	16.266	17.730
4	3.357	7.779	9.488	11.143	13.277	14.860	18.467	19.997
5	4.351	9.236	11.070	12.833	15.086	16.750	20.515	22.105
6	5.348	10.645	12.592	14.449	16.812	18.548	22.458	24.103
7	6.346	12.017	14.067	16.013	18.475	20.278	24.322	26.018
8	7.344	13.362	15.507	17.535	20.090	21.955	26.124	27.868
9	8.343	14.684	16.919	19.023	21.666	23.589	27.877	29.666
10	9.342	15.987	18.307	20.483	23.209	25.188	29.588	31.420
11	10.341	17.275	19.675	21.920	24.725	26.757	31.264	33.137
12	11.340	18.549	21.026	23.337	26.217	28.300	32.909	34.821
13	12.340	19.812	22.362	24.736	27.688	29.819	34.528	36.478
14	13.339	21.064	23.685	26.119	29.141	31.319	36.123	38.109
15	14.339	22.307	24.996	27.488	30.578	32.801	37.697	39.719
16	15.338	23.542	26.296	28.845	32.000	34.267	39.252	41.308
17	16.338	24.769	27.587	30.191	33.409	35.718	40.790	42.879
18	17.338	25.989	28.869	31.526	34.805	37.156	42.312	44.434
19	18.338	27.204	30.144	32.852	36.191	38.582	43.820	45.973
20	19.337	28.412	31.410	34.170	37.566	39.997	45.315	47.498
21	20.337	29.615	32.671	35.479	38.932	41.401	46.797	49.011
22	21.337	30.813	33.924	36.781	40.289	42.796	48.268	50.511
23	22.337	32.007	35.172	38.076	41.638	44.181	49.728	52.000
24	23.337	33.196	36.415	39.364	42.980	45.559	51.179	53.479
25	24.337	34.382	37.652	40.646	44.314	46.928	52.620	54.947
26	25.336	35.563	38.885	41.923	45.642	48.290	54.052	56.407
27	26.336	36.741	40.113	43.195	46.963	49.645	55.476	57.858
28	27.336	37.916	41.337	44.461	48.278	50.993	56.892	59.300
29	28.336	39.087	42.557	45.722	49.588	52.336	58.301	60.735
30	29.336	40.256	43.773	46.979	50.892	53.672	59.703	62.162

### C.3 Loi de STUDENT

**Fractiles de la loi de STUDENT**

p	0.5	0.6	0.7	0.8	0.9	0.95	0.975	0.99	0.995	0.999	0.9995
1	0.	0.325	0.727	1.376	3.078	6.314	12.706	31.821	63.657	318.309	636.619
2	0.	0.289	0.617	1.061	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.	0.277	0.584	0.978	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.	0.271	0.569	0.941	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.	0.267	0.559	0.920	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.	0.265	0.553	0.906	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.	0.263	0.549	0.896	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.	0.262	0.546	0.889	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.	0.261	0.543	0.883	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.	0.260	0.542	0.879	1.372	1.812	2.228	2.764	3.169	4.144	4.587
11	0.	0.260	0.540	0.876	1.363	1.796	2.201	2.718	3.106	4.025	4.437
12	0.	0.259	0.539	0.873	1.356	1.782	2.179	2.681	3.055	3.930	4.318
13	0.	0.259	0.538	0.870	1.350	1.771	2.160	2.650	3.012	3.852	4.221
14	0.	0.258	0.537	0.868	1.345	1.761	2.145	2.624	2.977	3.787	4.140
15	0.	0.258	0.536	0.866	1.341	1.753	2.131	2.602	2.947	3.733	4.073
16	0.	0.258	0.535	0.865	1.337	1.746	2.120	2.583	2.921	3.686	4.015
17	0.	0.257	0.534	0.863	1.333	1.740	2.110	2.567	2.898	3.646	3.965
18	0.	0.257	0.534	0.862	1.330	1.734	2.101	2.552	2.878	3.610	3.922
19	0.	0.257	0.533	0.861	1.328	1.729	2.093	2.539	2.861	3.579	3.883
20	0.	0.257	0.533	0.860	1.325	1.725	2.086	2.528	2.845	3.552	3.850
21	0.	0.257	0.532	0.859	1.323	1.721	2.080	2.518	2.831	3.527	3.819
22	0.	0.256	0.532	0.858	1.321	1.717	2.074	2.508	2.819	3.505	3.792
23	0.	0.256	0.532	0.858	1.319	1.714	2.069	2.500	2.807	3.485	3.768
24	0.	0.256	0.531	0.857	1.318	1.711	2.064	2.492	2.797	3.467	3.745
25	0.	0.256	0.531	0.856	1.316	1.708	2.060	2.485	2.787	3.450	3.725
26	0.	0.256	0.531	0.856	1.315	1.706	2.056	2.479	2.779	3.435	3.707
27	0.	0.256	0.531	0.855	1.314	1.703	2.052	2.473	2.771	3.421	3.690
28	0.	0.256	0.530	0.855	1.313	1.701	2.048	2.467	2.763	3.408	3.674
29	0.	0.256	0.530	0.854	1.311	1.699	2.045	2.462	2.756	3.396	3.659
30	0.	0.256	0.530	0.854	1.310	1.697	2.042	2.457	2.750	3.385	3.646
40	0.	0.255	0.529	0.851	1.303	1.684	2.021	2.423	2.704	3.307	3.551
60	0.	0.254	0.527	0.848	1.296	1.671	2.000	2.390	2.660	3.232	3.460
80	0.	0.254	0.526	0.846	1.292	1.664	1.990	2.374	2.639	3.195	3.416
100	0.	0.254	0.526	0.845	1.290	1.660	1.984	2.364	2.626	3.174	3.390
200	0.	0.254	0.525	0.843	1.286	1.653	1.972	2.345	2.601	3.131	3.340
∞	0.	0.253	0.524	0.842	1.282	1.645	1.960	2.326	2.576	3.090	3.291

Le fractile  $t$  est tel que  $\mathbb{P}(T < t) = p$ .

## C.4 Loi de FISHER-SNEDECOR

### Fractiles de la loi de FISHER-SNEDECOR

$$p = 0.95$$

$n_2 \backslash n_1$	1	2	3	4	5	6	7	8	10	12	20	40	60	100	$\infty$
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.40	19.41	19.45	19.47	19.48	19.49	19.50
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.79	8.74	8.66	8.59	8.57	8.55	8.53
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	5.96	5.91	5.80	5.72	5.69	5.66	5.63
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.74	4.68	4.56	4.46	4.43	4.41	4.37
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.06	4.00	3.87	3.77	3.74	3.71	3.67
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.64	3.57	3.44	3.34	3.30	3.27	3.23
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.35	3.28	3.15	3.04	3.01	2.97	2.93
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.14	3.07	2.94	2.83	2.79	2.76	2.71
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	2.98	2.91	2.77	2.66	2.62	2.59	2.54
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.85	2.79	2.65	2.53	2.49	2.46	2.41
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.75	2.69	2.54	2.43	2.38	2.35	2.30
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.67	2.60	2.46	2.34	2.30	2.26	2.21
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.60	2.53	2.39	2.27	2.22	2.19	2.13
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.54	2.48	2.33	2.20	2.16	2.12	2.07
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.49	2.42	2.28	2.15	2.11	2.07	2.01
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.45	2.38	2.23	2.10	2.06	2.02	1.96
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.41	2.34	2.19	2.06	2.02	1.98	1.92
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.38	2.31	2.16	2.03	1.98	1.94	1.88
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.35	2.28	2.12	1.99	1.95	1.91	1.84
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.32	2.25	2.10	1.96	1.92	1.88	1.81
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.30	2.23	2.07	1.94	1.89	1.85	1.78
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.27	2.20	2.05	1.91	1.86	1.82	1.76
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.25	2.18	2.03	1.89	1.84	1.80	1.73
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.24	2.16	2.01	1.87	1.82	1.78	1.71
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.22	2.15	1.99	1.85	1.80	1.76	1.69
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.20	2.13	1.97	1.84	1.79	1.74	1.67
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.19	2.12	1.96	1.82	1.77	1.73	1.65
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.18	2.10	1.94	1.81	1.75	1.71	1.64
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.16	2.09	1.93	1.79	1.74	1.70	1.62
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.08	2.0	1.84	1.69	1.64	1.59	1.51
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	1.99	1.92	1.75	1.59	1.53	1.48	1.39
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02	1.91	1.83	1.66	1.50	1.43	1.37	1.26
$\infty$	3.84	3.00	2.61	2.37	2.21	2.10	2.01	1.94	1.83	1.75	1.57	1.40	1.32	1.25	1.03

**Fractiles de la loi de FISHER-SNEDECOR (suite)**

$$p = 0.975$$

$n_2 \backslash n_1$	1	2	3	4	5	6	7	8	10	12	20	40	60	100	$\infty$
2	38.51	39.00	39.17	39.25	39.30	39.33	39.36	39.37	39.40	39.41	39.45	39.47	39.48	39.49	39.50
3	17.44	16.04	15.44	15.10	14.88	14.73	14.62	14.54	14.42	14.34	14.17	14.04	13.99	13.96	13.90
4	12.22	10.65	9.98	9.60	9.36	9.20	9.07	8.98	8.84	8.75	8.56	8.41	8.36	8.32	8.26
5	10.01	8.43	7.76	7.39	7.15	6.98	6.85	6.76	6.62	6.52	6.33	6.18	6.12	6.08	6.02
6	8.81	7.26	6.60	6.23	5.99	5.82	5.70	5.60	5.46	5.37	5.17	5.01	4.96	4.92	4.85
7	8.07	6.54	5.89	5.52	5.29	5.12	4.99	4.90	4.76	4.67	4.47	4.31	4.25	4.21	4.14
8	7.57	6.06	5.42	5.05	4.82	4.65	4.53	4.43	4.30	4.20	4.00	3.84	3.78	3.74	3.67
9	7.21	5.71	5.08	4.72	4.48	4.32	4.20	4.10	3.96	3.87	3.67	3.51	3.45	3.40	3.33
10	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.72	3.62	3.42	3.26	3.20	3.15	3.08
11	6.72	5.26	4.63	4.28	4.04	3.88	3.76	3.66	3.53	3.43	3.23	3.06	3.00	2.96	2.88
12	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.37	3.28	3.07	2.91	2.85	2.80	2.73
13	6.41	4.97	4.35	4.00	3.77	3.60	3.48	3.39	3.25	3.15	2.95	2.78	2.72	2.67	2.60
14	6.30	4.86	4.24	3.89	3.66	3.50	3.38	3.29	3.15	3.05	2.84	2.67	2.61	2.56	2.49
15	6.20	4.77	4.15	3.80	3.58	3.41	3.29	3.20	3.06	2.96	2.76	2.59	2.52	2.47	2.40
16	6.12	4.69	4.08	3.73	3.50	3.34	3.22	3.12	2.99	2.89	2.68	2.51	2.45	2.40	2.32
17	6.04	4.62	4.01	3.66	3.44	3.28	3.16	3.06	2.92	2.82	2.62	2.44	2.38	2.33	2.25
18	5.98	4.56	3.95	3.61	3.38	3.22	3.10	3.01	2.87	2.77	2.56	2.38	2.32	2.27	2.19
19	5.92	4.51	3.90	3.56	3.33	3.17	3.05	2.96	2.82	2.72	2.51	2.33	2.27	2.22	2.13
20	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.77	2.68	2.46	2.29	2.22	2.17	2.09
21	5.83	4.42	3.82	3.48	3.25	3.09	2.97	2.87	2.73	2.64	2.42	2.25	2.18	2.13	2.04
22	5.79	4.38	3.78	3.44	3.22	3.05	2.93	2.84	2.70	2.60	2.39	2.21	2.14	2.09	2.00
23	5.75	4.35	3.75	3.41	3.18	3.02	2.90	2.81	2.67	2.57	2.36	2.18	2.11	2.06	1.97
24	5.72	4.32	3.72	3.38	3.15	2.99	2.87	2.78	2.64	2.54	2.33	2.15	2.08	2.02	1.94
25	5.69	4.29	3.69	3.35	3.13	2.97	2.85	2.75	2.61	2.51	2.30	2.12	2.05	2.00	1.91
26	5.66	4.27	3.67	3.33	3.10	2.94	2.82	2.73	2.59	2.49	2.28	2.09	2.03	1.97	1.88
27	5.63	4.24	3.65	3.31	3.08	2.92	2.80	2.71	2.57	2.47	2.25	2.07	2.00	1.94	1.85
28	5.61	4.22	3.63	3.29	3.06	2.90	2.78	2.69	2.55	2.45	2.23	2.05	1.98	1.92	1.83
29	5.59	4.20	3.61	3.27	3.04	2.88	2.76	2.67	2.53	2.43	2.21	2.03	1.96	1.90	1.81
30	5.57	4.18	3.59	3.25	3.03	2.87	2.75	2.65	2.51	2.41	2.20	2.01	1.94	1.88	1.79
40	5.42	4.05	3.46	3.13	2.90	2.74	2.62	2.53	2.39	2.29	2.07	1.88	1.80	1.74	1.64
60	5.29	3.93	3.34	3.01	2.79	2.63	2.51	2.41	2.27	2.17	1.94	1.74	1.67	1.60	1.48
120	5.15	3.80	3.23	2.89	2.67	2.52	2.39	2.30	2.16	2.05	1.82	1.61	1.53	1.45	1.31
$\infty$	5.03	3.69	3.12	2.79	2.57	2.41	2.29	2.19	2.05	1.95	1.71	1.49	1.39	1.30	1.04



**Fractiles de la loi de FISHER-SNEDECOR (suite et fin)**

$$p = 0.99$$

$n_2 \backslash n_1$	1	2	3	4	5	6	7	8	10	12	20	40	60	100	$\infty$
2	98.50	99.00	99.17	99.25	99.30	99.33	99.36	99.37	99.40	99.42	99.45	99.47	99.48	99.49	99.50
3	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.23	27.05	26.69	26.41	26.32	26.24	26.13
4	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.55	14.37	14.02	13.75	13.65	13.58	13.46
5	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.05	9.89	9.55	9.29	9.20	9.13	9.02
6	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.87	7.72	7.40	7.14	7.06	6.99	6.88
7	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.62	6.47	6.16	5.91	5.82	5.75	5.65
8	11.26	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.81	5.67	5.36	5.12	5.03	4.96	4.86
9	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.26	5.11	4.81	4.57	4.48	4.41	4.31
10	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.85	4.71	4.41	4.17	4.08	4.01	3.91
11	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74	4.54	4.40	4.10	3.86	3.78	3.71	3.60
12	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.30	4.16	3.86	3.62	3.54	3.47	3.36
13	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30	4.10	3.96	3.66	3.43	3.34	3.27	3.17
14	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	3.94	3.80	3.51	3.27	3.18	3.11	3.01
15	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.80	3.67	3.37	3.13	3.05	2.98	2.87
16	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.69	3.55	3.26	3.02	2.93	2.86	2.75
17	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79	3.59	3.46	3.16	2.92	2.83	2.76	2.65
18	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.51	3.37	3.08	2.84	2.75	2.68	2.57
19	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63	3.43	3.30	3.00	2.76	2.67	2.6	2.49
20	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.37	3.23	2.94	2.69	2.61	2.54	2.42
21	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51	3.31	3.17	2.88	2.64	2.55	2.48	2.36
22	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45	3.26	3.12	2.83	2.58	2.50	2.42	2.31
23	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41	3.21	3.07	2.78	2.54	2.45	2.37	2.26
24	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.17	3.03	2.74	2.49	2.40	2.33	2.21
25	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.13	2.99	2.70	2.45	2.36	2.29	2.17
26	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29	3.09	2.96	2.66	2.42	2.33	2.25	2.13
27	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26	3.06	2.93	2.63	2.38	2.29	2.22	2.10
28	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23	3.03	2.90	2.60	2.35	2.26	2.19	2.07
29	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20	3.00	2.87	2.57	2.33	2.23	2.16	2.04
30	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	2.98	2.84	2.55	2.30	2.21	2.13	2.01
40	7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.80	2.66	2.37	2.11	2.02	1.94	1.81
60	7.08	4.98	4.13	3.65	3.34	3.12	2.95	2.82	2.63	2.50	2.20	1.94	1.84	1.75	1.60
120	6.85	4.79	3.95	3.48	3.17	2.96	2.79	2.66	2.47	2.34	2.03	1.76	1.66	1.56	1.38
$\infty$	6.64	4.61	3.78	3.32	3.02	2.80	2.64	2.51	2.32	2.19	1.88	1.59	1.48	1.36	1.05