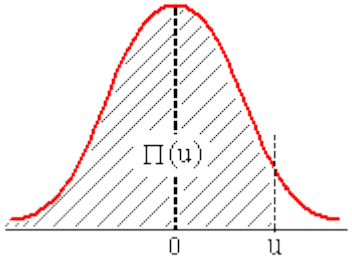
Fonction de répartition de la loi normale centrée réduite.

F(u)=P(U<u)

P (-u) = 1 - P (u)



u	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.50000	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	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	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
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

Fractiles de la Loi Normale centrée réduite

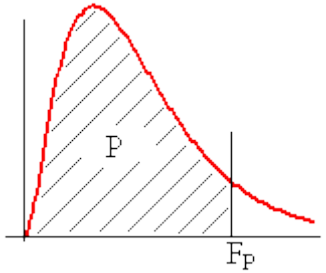
Pour P < 0.5 (colonne de gauche et ligne supérieure), les fractiles sont négatifs.
Pour P > 0.5 (colonne de droite et ligne inférieure), les fractiles sont positifs.

P	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01	
0	infini	3.0902	2.8782	2.7478	2.6521	2.5758	2.5121	2.4573	2.4089	2.3656	2.3263	0.99
0.01	2.3263	2.2904	2.2571	2.2262	2.1973	2.1701	2.1444	2.1201	2.0969	2.0748	2.0537	0.98
0.02	2.0537	2.0335	2.0141	1.9954	1.9774	1.9600	1.9431	1.9268	1.9110	1.8957	1.8808	0.97
0.03	1.8808	1.8663	1.8522	1.8384	1.8250	1.8119	1.7991	1.7866	1.7744	1.7624	1.7507	0.96
0.04	1.7507	1.7392	1.7279	1.7169	1.7060	1.6954	1.6849	1.6747	1.6646	1.6546	1.6449	0.95
0.05	1.6449	1.6352	1.6258	1.6164	1.6072	1.5982	1.5893	1.5805	1.5718	1.5632	1.5548	0.94
0.06	1.5548	1.5464	1.5382	1.5301	1.5220	1.5141	1.5063	1.4985	1.4909	1.4833	1.4758	0.93
0.07	1.4758	1.4684	1.4611	1.4538	1.4466	1.4395	1.4325	1.4255	1.4187	1.4118	1.4051	0.92
0.08	1.4051	1.3984	1.3917	1.3852	1.3787	1.3722	1.3658	1.3595	1.3532	1.3469	1.3408	0.91
0.09	1.3408	1.3346	1.3285	1.3225	1.3165	1.3106	1.3047	1.2988	1.2930	1.2873	1.2816	0.90
0.10	1.2816	1.2759	1.2702	1.2646	1.2591	1.2536	1.2481	1.2426	1.2372	1.2319	1.2265	0.89
0.11	1.2265	1.2212	1.2160	1.2107	1.2055	1.2004	1.1952	1.1901	1.1850	1.1800	1.1750	0.88
0.12	1.1750	1.1700	1.1650	1.1601	1.1552	1.1503	1.1455	1.1407	1.1359	1.1311	1.1264	0.87
0.13	1.1264	1.1217	1.1170	1.1123	1.1077	1.1031	1.0985	1.0939	1.0893	1.0848	1.0803	0.86
0.14	1.0803	1.0758	1.0714	1.0669	1.0625	1.0581	1.0537	1.0494	1.0451	1.0407	1.0364	0.85
0.15	1.0364	1.0322	1.0279	1.0237	1.0194	1.0152	1.0110	1.0069	1.0027	0.9986	0.9945	0.84
0.16	0.9945	0.9904	0.9863	0.9822	0.9782	0.9741	0.9701	0.9661	0.9621	0.9581	0.9542	0.83
0.17	0.9542	0.9502	0.9463	0.9424	0.9385	0.9346	0.9307	0.9269	0.9230	0.9192	0.9154	0.82
0.18	0.9154	0.9116	0.9078	0.9040	0.9002	0.8965	0.8927	0.8890	0.8853	0.8816	0.8779	0.81
0.19	0.8779	0.8742	0.8706	0.8669	0.8632	0.8596	0.8560	0.8524	0.8488	0.8452	0.8416	0.80
0.20	0.8416	0.8381	0.8345	0.8310	0.8274	0.8239	0.8204	0.8169	0.8134	0.8099	0.8064	0.79
0.21	0.8064	0.8030	0.7995	0.7961	0.7926	0.7892	0.7858	0.7824	0.7790	0.7756	0.7722	0.78
0.22	0.7722	0.7688	0.7655	0.7621	0.7588	0.7554	0.7521	0.7488	0.7454	0.7421	0.7388	0.77
0.23	0.7388	0.7356	0.7323	0.7290	0.7257	0.7225	0.7192	0.7160	0.7128	0.7095	0.7063	0.76
0.24	0.7063	0.7031	0.6999	0.6967	0.6935	0.6903	0.6871	0.6840	0.6808	0.6776	0.6745	0.75
0.25	0.6745	0.6713	0.6682	0.6651	0.6620	0.6588	0.6557	0.6526	0.6495	0.6464	0.6433	0.74
0.26	0.6433	0.6403	0.6372	0.6341	0.6311	0.6280	0.6250	0.6219	0.6189	0.6158	0.6128	0.73
0.27	0.6128	0.6098	0.6068	0.6038	0.6008	0.5978	0.5948	0.5918	0.5888	0.5858	0.5828	0.72
0.28	0.5828	0.5799	0.5769	0.5740	0.5710	0.5681	0.5651	0.5622	0.5592	0.5563	0.5534	0.71
0.29	0.5534	0.5505	0.5476	0.5446	0.5417	0.5388	0.5359	0.5330	0.5302	0.5273	0.5244	0.70
0.30	0.5244	0.5215	0.5187	0.5158	0.5129	0.5101	0.5072	0.5044	0.5015	0.4987	0.4958	0.69
0.31	0.4958	0.4930	0.4902	0.4874	0.4845	0.4817	0.4789	0.4761	0.4733	0.4705	0.4677	0.68
0.32	0.4677	0.4649	0.4621	0.4593	0.4565	0.4538	0.4510	0.4482	0.4454	0.4427	0.4399	0.67
0.33	0.4399	0.4372	0.4344	0.4316	0.4289	0.4261	0.4234	0.4207	0.4179	0.4152	0.4125	0.66
0.34	0.4125	0.4097	0.4070	0.4043	0.4016	0.3989	0.3961	0.3934	0.3907	0.3880	0.3853	0.65
0.35	0.3853	0.3826	0.3799	0.3772	0.3745	0.3719	0.3692	0.3665	0.3638	0.3611	0.3585	0.64
0.36	0.3585	0.3558	0.3531	0.3505	0.3478	0.3451	0.3425	0.3398	0.3372	0.3345	0.3319	0.63
0.37	0.3319	0.3292	0.3266	0.3239	0.3213	0.3186	0.3160	0.3134	0.3107	0.3081	0.3055	0.62
0.38	0.3055	0.3029	0.3002	0.2976	0.2950	0.2924	0.2898	0.2871	0.2845	0.2819	0.2793	0.61
0.39	0.2793	0.2767	0.2741	0.2715	0.2689	0.2663	0.2637	0.2611	0.2585	0.2559	0.2533	0.60
0.40	0.2533	0.2508	0.2482	0.2456	0.2430	0.2404	0.2378	0.2353	0.2327	0.2301	0.2275	0.59
0.41	0.2275	0.2250	0.2224	0.2198	0.2173	0.2147	0.2121	0.2096	0.2070	0.2045	0.2019	0.58
0.42	0.2019	0.1993	0.1968	0.1942	0.1917	0.1891	0.1866	0.1840	0.1815	0.1789	0.1764	0.57
0.43	0.1764	0.1738	0.1713	0.1687	0.1662	0.1637	0.1611	0.1586	0.1560	0.1535	0.1510	0.56
0.44	0.1510	0.1484	0.1459	0.1434	0.1408	0.1383	0.1358	0.1332	0.1307	0.1282	0.1257	0.55
0.45	0.1257	0.1231	0.1206	0.1181	0.1156	0.1130	0.1105	0.1080	0.1055	0.1030	0.1004	0.54
0.46	0.1004	0.0979	0.0954	0.0929	0.0904	0.0878	0.0853	0.0828	0.0803	0.0778	0.0753	0.53
0.47	0.0753	0.0728	0.0702	0.0677	0.0652	0.0627	0.0602	0.0577	0.0552	0.0527	0.0502	0.52
0.48	0.0502	0.0476	0.0451	0.0426	0.0401	0.0376	0.0351	0.0326	0.0301	0.0276	0.0251	0.51
0.49	0.0251	0.0226	0.0201	0.0175	0.0150	0.0125	0.0100	0.0075	0.0050	0.0025	0.0000	0.50
	0.01	0.009	0.008	0.007	0.006	0.005	0.004	0.003	0.002	0.001	0	P

Fractiles de la loi du χ^2 (ν)

Cette table donne les fractiles F_P de la loi de khi-deux

à n degrés de liberté : P = Probabilité ($\chi^2 < F_P$)



	0.01	0.02	0.05	0.1	0.15	0.2	0.25	0.3	0.4	0.5	0.6	0.7	0.75	0.8	0.85	0.9	0.95	0.98	0.99	0.999
1	0.000	0.001	0.004	0.016	0.036	0.064	0.102	0.148	0.275	0.455	0.708	1.074	1.323	1.642	2.072	2.706	3.841	5.412	6.635	10.827
2	0.020	0.040	0.103	0.211	0.325	0.446	0.575	0.713	1.022	1.386	1.833	2.408	2.773	3.219	3.794	4.605	5.991	7.824	9.210	13.815
3	0.115	0.185	0.352	0.584	0.798	1.005	1.213	1.424	1.869	2.366	2.946	3.665	4.108	4.642	5.317	6.251	7.815	9.837	11.345	16.266
4	0.297	0.429	0.711	1.064	1.366	1.649	1.923	2.195	2.753	3.357	4.045	4.878	5.385	5.989	6.745	7.779	9.488	11.668	13.277	18.466
5	0.554	0.752	1.145	1.610	1.994	2.343	2.675	3.000	3.656	4.351	5.132	6.064	6.626	7.289	8.115	9.236	11.070	13.388	15.086	20.515
6	0.872	1.134	1.635	2.204	2.661	3.070	3.455	3.828	4.570	5.348	6.211	7.231	7.841	8.558	9.446	10.645	12.592	15.033	16.812	22.457
7	1.239	1.564	2.167	2.833	3.358	3.822	4.255	4.671	5.493	6.346	7.283	8.383	9.037	9.803	10.748	12.017	14.067	16.622	18.475	24.321
8	1.647	2.032	2.733	3.490	4.078	4.594	5.071	5.527	6.423	7.344	8.351	9.524	10.219	11.030	12.027	13.362	15.507	18.168	20.090	26.124
9	2.088	2.532	3.325	4.168	4.817	5.380	5.899	6.393	7.357	8.343	9.414	10.656	11.389	12.242	13.288	14.684	16.919	19.679	21.666	27.877
10	2.558	3.059	3.940	4.865	5.570	6.179	6.737	7.267	8.295	9.342	10.473	11.781	12.549	13.442	14.534	15.987	18.307	21.161	23.209	29.588
11	3.053	3.609	4.575	5.578	6.336	6.989	7.584	8.148	9.237	10.341	11.530	12.899	13.701	14.631	15.767	17.275	19.675	22.618	24.725	31.264
12	3.571	4.178	5.226	6.304	7.114	7.807	8.438	9.034	10.182	11.340	12.584	14.011	14.845	15.812	16.989	18.549	21.026	24.054	26.217	32.909
13	4.107	4.765	5.892	7.041	7.901	8.634	9.299	9.926	11.129	12.340	13.636	15.119	15.984	16.985	18.202	19.812	22.362	25.471	27.688	34.527
14	4.660	5.368	6.571	7.790	8.696	9.467	10.165	10.821	12.078	13.339	14.685	16.222	17.117	18.151	19.406	21.064	23.685	26.873	29.141	36.124
15	5.229	5.985	7.261	8.547	9.499	10.307	11.037	11.721	13.030	14.339	15.733	17.322	18.245	19.311	20.603	22.307	24.996	28.259	30.578	37.698
16	5.812	6.614	7.962	9.312	10.309	11.152	11.912	12.624	13.983	15.338	16.780	18.418	19.369	20.465	21.793	23.542	26.296	29.633	32.000	39.252
17	6.408	7.255	8.672	10.085	11.125	12.002	12.792	13.531	14.937	16.338	17.824	19.511	20.489	21.615	22.977	24.769	27.587	30.995	33.409	40.791
18	7.015	7.906	9.390	10.865	11.946	12.857	13.675	14.440	15.893	17.338	18.868	20.601	21.605	22.760	24.155	25.989	28.869	32.346	34.805	42.312
19	7.633	8.567	10.117	11.651	12.773	13.716	14.562	15.352	16.850	18.338	19.910	21.689	22.718	23.900	25.329	27.204	30.144	33.687	36.191	43.819
20	8.260	9.237	10.851	12.443	13.604	14.578	15.452	16.266	17.809	19.337	20.951	22.775	23.828	25.038	26.498	28.412	31.410	35.020	37.566	45.314
21	8.897	9.915	11.591	13.240	14.439	15.445	16.344	17.182	18.768	20.337	21.992	23.858	24.935	26.171	27.662	29.615	32.671	36.343	38.932	46.796

22	9.542	10.600	12.338	14.041	15.279	16.314	17.240	18.101	19.729	21.337	23.031	24.939	26.039	27.301	28.822	30.813	33.924	37.659	40.289	48.268
23	10.196	11.293	13.091	14.848	16.122	17.187	18.137	19.021	20.690	22.337	24.069	26.018	27.141	28.429	29.979	32.007	35.172	38.968	41.638	49.728
24	10.856	11.992	13.848	15.659	16.969	18.062	19.037	19.943	21.652	23.337	25.106	27.096	28.241	29.553	31.132	33.196	36.415	40.270	42.980	51.179
25	11.524	12.697	14.611	16.473	17.818	18.940	19.939	20.867	22.616	24.337	26.143	28.172	29.339	30.675	32.282	34.382	37.652	41.566	44.314	52.619
26	12.198	13.409	15.379	17.292	18.671	19.820	20.843	21.792	23.579	25.336	27.179	29.246	30.435	31.795	33.429	35.563	38.885	42.856	45.642	54.051
27	12.878	14.125	16.151	18.114	19.527	20.703	21.749	22.719	24.544	26.336	28.214	30.319	31.528	32.912	34.574	36.741	40.113	44.140	46.963	55.475
28	13.565	14.847	16.928	18.939	20.386	21.588	22.657	23.647	25.509	27.336	29.249	31.391	32.620	34.027	35.715	37.916	41.337	45.419	48.278	56.892
29	14.256	15.574	17.708	19.768	21.247	22.475	23.567	24.577	26.475	28.336	30.283	32.461	33.711	35.139	36.854	39.087	42.557	46.693	49.588	58.301
30	14.953	16.306	18.493	20.599	22.110	23.364	24.478	25.508	27.442	29.336	31.316	33.530	34.800	36.250	37.990	40.256	43.773	47.962	50.892	59.702
31	15.655	17.042	19.281	21.434	22.976	24.255	25.390	26.440	28.409	30.336	32.349	34.598	35.887	37.359	39.124	41.422	44.985	49.226	52.191	61.098
32	16.362	17.783	20.072	22.271	23.844	25.148	26.304	27.373	29.376	31.336	33.381	35.665	36.973	38.466	40.256	42.585	46.194	50.487	53.486	62.487
33	17.073	18.527	20.867	23.110	24.714	26.042	27.219	28.307	30.344	32.336	34.413	36.731	38.058	39.572	41.386	43.745	47.400	51.743	54.775	63.869
34	17.789	19.275	21.664	23.952	25.586	26.938	28.136	29.242	31.313	33.336	35.444	37.795	39.141	40.676	42.514	44.903	48.602	52.995	56.061	65.247
35	18.509	20.027	22.465	24.797	26.460	27.836	29.054	30.178	32.282	34.336	36.475	38.859	40.223	41.778	43.640	46.059	49.802	54.244	57.342	66.619
36	19.233	20.783	23.269	25.643	27.336	28.735	29.973	31.115	33.252	35.336	37.505	39.922	41.304	42.879	44.764	47.212	50.998	55.489	58.619	67.985
37	19.960	21.542	24.075	26.492	28.214	29.635	30.893	32.053	34.222	36.336	38.535	40.984	42.383	43.978	45.886	48.363	52.192	56.730	59.893	69.348
38	20.691	22.304	24.884	27.343	29.093	30.537	31.815	32.992	35.192	37.335	39.564	42.045	43.462	45.076	47.007	49.513	53.384	57.969	61.162	70.704
39	21.426	23.069	25.695	28.196	29.974	31.441	32.737	33.932	36.163	38.335	40.593	43.105	44.539	46.173	48.126	50.660	54.572	59.204	62.428	72.055
40	22.164	23.838	26.509	29.051	30.856	32.345	33.660	34.872	37.134	39.335	41.622	44.165	45.616	47.269	49.244	51.805	55.758	60.436	63.691	73.403
41	22.906	24.609	27.326	29.907	31.740	33.251	34.585	35.813	38.105	40.335	42.651	45.224	46.692	48.363	50.360	52.949	56.942	61.665	64.950	74.744
42	23.650	25.383	28.144	30.765	32.626	34.157	35.510	36.755	39.077	41.335	43.679	46.282	47.766	49.456	51.475	54.090	58.124	62.892	66.206	76.084
43	24.398	26.159	28.965	31.625	33.512	35.065	36.436	37.698	40.050	42.335	44.706	47.339	48.840	50.548	52.588	55.230	59.304	64.116	67.459	77.418
44	25.148	26.939	29.787	32.487	34.400	35.974	37.363	38.641	41.022	43.335	45.734	48.396	49.913	51.639	53.700	56.369	60.481	65.337	68.710	78.749
45	25.901	27.720	30.612	33.350	35.290	36.884	38.291	39.585	41.995	44.335	46.761	49.452	50.985	52.729	54.810	57.505	61.656	66.555	69.957	80.078
46	26.657	28.504	31.439	34.215	36.180	37.795	39.220	40.529	42.968	45.335	47.787	50.507	52.056	53.818	55.920	58.641	62.830	67.771	71.201	81.400
47	27.416	29.291	32.268	35.081	37.072	38.708	40.149	41.474	43.942	46.335	48.814	51.562	53.127	54.906	57.028	59.774	64.001	68.985	72.443	82.720
48	28.177	30.080	33.098	35.949	37.965	39.621	41.079	42.420	44.915	47.335	49.840	52.616	54.196	55.993	58.135	60.907	65.171	70.197	73.683	84.037
49	28.941	30.871	33.930	36.818	38.859	40.534	42.010	43.366	45.889	48.335	50.866	53.670	55.265	57.079	59.241	62.038	66.339	71.406	74.919	85.350
50	29.707	31.664	34.764	37.689	39.754	41.449	42.942	44.313	46.864	49.335	51.892	54.723	56.334	58.164	60.346	63.167	67.505	72.613	76.154	86.660
51	30.475	32.459	35.600	38.560	40.650	42.365	43.874	45.261	47.838	50.335	52.917	55.775	57.401	59.248	61.450	64.295	68.669	73.818	77.386	87.967
52	31.246	33.256	36.437	39.433	41.547	43.281	44.807	46.209	48.813	51.335	53.942	56.827	58.468	60.332	62.553	65.422	69.832	75.021	78.616	89.272

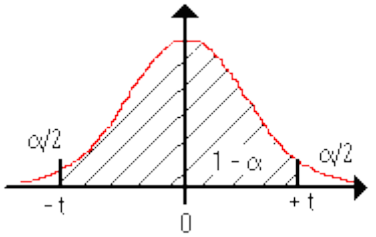
53	32.019	34.055	37.276	40.308	42.446	44.199	45.741	47.157	49.788	52.335	54.967	57.879	59.534	61.414	63.654	66.548	70.993	76.223	79.843	90.573
54	32.793	34.856	38.116	41.183	43.345	45.117	46.676	48.106	50.764	53.335	55.992	58.930	60.600	62.496	64.755	67.673	72.153	77.422	81.069	91.871
55	33.571	35.659	38.958	42.060	44.245	46.036	47.610	49.055	51.739	54.335	57.016	59.980	61.665	63.577	65.855	68.796	73.311	78.619	82.292	93.167
56	34.350	36.464	39.801	42.937	45.146	46.955	48.546	50.005	52.715	55.335	58.040	61.031	62.729	64.658	66.954	69.919	74.468	79.815	83.514	94.462
57	35.131	37.270	40.646	43.816	46.048	47.876	49.482	50.956	53.691	56.335	59.064	62.080	63.793	65.737	68.052	71.040	75.624	81.009	84.733	95.750
58	35.914	38.078	41.492	44.696	46.951	48.797	50.419	51.906	54.667	57.335	60.088	63.129	64.857	66.816	69.149	72.160	76.778	82.201	85.950	97.038
59	36.698	38.888	42.339	45.577	47.854	49.718	51.356	52.858	55.643	58.335	61.111	64.178	65.919	67.894	70.246	73.279	77.930	83.391	87.166	98.324
60	37.485	39.699	43.188	46.459	48.759	50.641	52.294	53.809	56.620	59.335	62.135	65.226	66.981	68.972	71.341	74.397	79.082	84.580	88.379	99.608
61	38.273	40.512	44.038	47.342	49.664	51.564	53.232	54.761	57.597	60.335	63.158	66.274	68.043	70.049	72.436	75.514	80.232	85.767	89.591	100.887
62	39.063	41.327	44.889	48.226	50.570	52.487	54.171	55.714	58.574	61.335	64.181	67.322	69.104	71.125	73.530	76.630	81.381	86.953	90.802	102.165
63	39.855	42.143	45.741	49.111	51.477	53.412	55.110	56.666	59.551	62.335	65.204	68.369	70.165	72.201	74.623	77.745	82.529	88.137	92.010	103.442
64	40.649	42.960	46.595	49.996	52.384	54.336	56.050	57.620	60.528	63.335	66.226	69.416	71.225	73.276	75.715	78.860	83.675	89.320	93.217	104.717
65	41.444	43.779	47.450	50.883	53.293	55.262	56.990	58.573	61.506	64.335	67.249	70.462	72.285	74.351	76.807	79.973	84.821	90.501	94.422	105.988
66	42.240	44.599	48.305	51.770	54.202	56.188	57.931	59.527	62.484	65.335	68.271	71.508	73.344	75.424	77.898	81.085	85.965	91.681	95.626	107.257
67	43.038	45.421	49.162	52.659	55.111	57.115	58.872	60.481	63.461	66.335	69.293	72.554	74.403	76.498	78.988	82.197	87.108	92.860	96.828	108.525
68	43.838	46.244	50.020	53.548	56.022	58.042	59.814	61.436	64.440	67.335	70.315	73.600	75.461	77.571	80.078	83.308	88.250	94.037	98.028	109.793
69	44.639	47.068	50.879	54.438	56.933	58.970	60.756	62.391	65.418	68.334	71.337	74.645	76.519	78.643	81.167	84.418	89.391	95.213	99.227	111.055
70	45.442	47.893	51.739	55.329	57.844	59.898	61.698	63.346	66.396	69.334	72.358	75.689	77.577	79.715	82.255	85.527	90.531	96.387	100.425	112.317
71	46.246	48.720	52.600	56.221	58.757	60.827	62.641	64.302	67.375	70.334	73.380	76.734	78.634	80.786	83.343	86.635	91.670	97.561	101.621	113.577
72	47.051	49.548	53.462	57.113	59.670	61.756	63.585	65.258	68.353	71.334	74.401	77.778	79.690	81.857	84.430	87.743	92.808	98.733	102.816	114.834
73	47.858	50.377	54.325	58.006	60.583	62.686	64.528	66.214	69.332	72.334	75.422	78.821	80.747	82.927	85.517	88.850	93.945	99.904	104.010	116.092
74	48.666	51.208	55.189	58.900	61.497	63.616	65.472	67.170	70.311	73.334	76.443	79.865	81.803	83.997	86.602	89.956	95.081	101.074	105.202	117.347
75	49.475	52.039	56.054	59.795	62.412	64.547	66.417	68.127	71.290	74.334	77.464	80.908	82.858	85.066	87.688	91.061	96.217	102.243	106.393	118.599
76	50.286	52.872	56.920	60.690	63.327	65.478	67.362	69.084	72.270	75.334	78.485	81.951	83.913	86.135	88.772	92.166	97.351	103.410	107.582	119.850
77	51.097	53.705	57.786	61.586	64.243	66.409	68.307	70.042	73.249	76.334	79.505	82.994	84.968	87.203	89.857	93.270	98.484	104.576	108.771	121.101
78	51.910	54.540	58.654	62.483	65.159	67.341	69.252	70.999	74.228	77.334	80.526	84.036	86.022	88.271	90.940	94.374	99.617	105.742	109.958	122.347
79	52.725	55.376	59.522	63.380	66.076	68.274	70.198	71.957	75.208	78.334	81.546	85.078	87.077	89.338	92.023	95.476	100.749	106.906	111.144	123.595
80	53.540	56.213	60.391	64.278	66.994	69.207	71.145	72.915	76.188	79.334	82.566	86.120	88.130	90.405	93.106	96.578	101.879	108.069	112.329	124.839
81	54.357	57.051	61.262	65.176	67.912	70.140	72.091	73.874	77.168	80.334	83.586	87.161	89.184	91.472	94.188	97.680	103.010	109.231	113.512	126.084
82	55.174	57.890	62.132	66.076	68.830	71.074	73.038	74.833	78.148	81.334	84.606	88.202	90.237	92.538	95.269	98.780	104.139	110.393	114.695	127.324
83	55.993	58.730	63.004	66.976	69.749	72.008	73.985	75.792	79.128	82.334	85.626	89.243	91.289	93.604	96.350	99.880	105.267	111.553	115.876	128.565

84	56.813	59.570	63.876	67.876	70.669	72.943	74.933	76.751	80.108	83.334	86.646	90.284	92.342	94.669	97.431	100.980	106.395	112.712	117.057	129.802
85	57.634	60.412	64.749	68.777	71.589	73.878	75.881	77.710	81.089	84.334	87.665	91.325	93.394	95.734	98.511	102.079	107.522	113.871	118.236	131.043
86	58.456	61.255	65.623	69.679	72.509	73.813	76.829	78.670	82.069	85.334	88.685	92.365	94.446	96.799	99.590	103.177	108.648	115.028	119.414	132.276
87	59.279	62.098	66.498	70.581	73.430	75.749	77.777	79.630	83.050	86.334	89.704	93.405	95.497	97.863	100.669	104.275	109.773	116.184	120.591	133.511
88	60.103	62.943	67.373	71.484	73.351	76.685	78.726	80.590	84.031	87.334	90.723	94.445	96.548	98.927	101.748	105.372	110.898	117.340	121.767	134.746
89	60.928	63.788	68.249	72.387	75.273	77.622	79.675	81.550	85.012	88.334	91.742	95.484	97.599	99.991	102.826	106.469	112.022	118.495	122.942	135.977
90	61.754	64.635	69.126	73.291	76.195	78.558	80.625	82.511	85.993	89.334	92.761	96.524	98.650	101.054	103.904	107.565	113.145	119.648	124.116	137.208
91	62.581	65.482	70.003	73.196	77.118	79.496	81.574	83.472	86.974	90.334	93.780	97.563	99.700	102.117	104.981	108.661	114.268	120.801	125.289	138.437
92	63.409	66.330	70.882	75.100	78.041	80.433	82.524	84.433	87.955	91.334	94.799	98.602	100.750	103.179	106.058	109.756	115.390	121.953	126.462	139.667
93	64.238	67.179	71.760	76.006	78.965	81.371	83.474	85.394	88.936	92.334	95.818	99.641	101.800	104.241	107.135	110.850	116.511	123.105	127.633	140.894
94	65.068	68.028	72.640	76.912	79.889	82.309	84.425	86.356	89.917	93.334	96.836	100.679	102.850	105.303	108.211	111.944	117.632	124.255	128.803	142.118
95	65.898	68.879	73.520	77.818	80.813	83.248	85.376	87.317	90.899	94.334	97.855	101.717	103.899	106.364	109.286	113.038	118.752	125.405	129.973	143.343
96	66.730	69.730	73.401	78.725	81.738	84.187	86.327	88.279	91.881	95.334	98.873	102.755	104.948	107.425	110.362	114.131	119.871	126.554	131.141	144.566
97	67.562	70.582	75.282	79.633	82.663	85.126	87.278	89.241	92.862	96.334	99.892	103.793	105.997	108.486	111.437	115.223	120.990	127.702	132.309	145.789
98	68.396	71.434	76.164	80.541	83.588	86.065	88.229	90.204	93.844	97.334	100.910	104.831	107.045	109.547	112.511	116.315	122.108	128.849	133.476	147.009
99	69.230	72.288	77.046	81.449	84.514	87.005	89.181	91.166	94.826	98.334	101.928	105.868	108.093	110.607	113.585	117.407	123.225	129.996	134.641	148.230
100	70.065	73.142	77.929	82.358	85.441	87.945	90.133	92.129	95.808	99.334	102.946	106.906	109.141	111.667	114.659	118.498	124.342	131.142	135.807	149.449

Pour $\nu > 100$, $\chi^2(\nu) \cong N(\nu ; \sqrt{2\nu})$ ou $\sqrt{2\chi^2} - \sqrt{2\nu - 1} \cong N(0,1)$

Table de la Loi de Student

Cette table donne les fractiles de la loi de Student à ν degrés de liberté : valeur t ayant la probabilité α d'être dépassée en valeur absolue : $P (- t < T < t) = 1 - \alpha$.
Ou : $P (T < - t) = \alpha / 2 = P (T > t)$



α bilatéral	1 - α / 2 (unilatéral)	ν (degré de liberté)

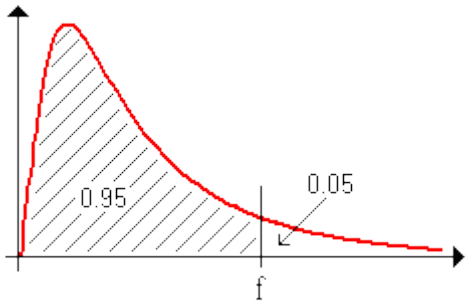
	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.05	0.02	0.01	0.005	0.001
	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	0.975	0.99	0.995	0.9975	0.9995
1	0.1584	0.3249	0.5095	0.7265	1	1.3764	1.9626	3.0777	6.3137	12.706	31.821	63.656	127.32	636.58
2	0.1421	0.2887	0.4447	0.6172	0.8165	1.0607	1.3862	1.8856	2.92	4.3027	6.9645	9.925	14.089	31.6
3	0.1366	0.2767	0.4242	0.5844	0.7649	0.9785	1.2498	1.6377	2.3534	3.1824	4.5407	5.8408	7.4532	12.924
4	0.1338	0.2707	0.4142	0.5686	0.7407	0.941	1.1896	1.5332	2.1318	2.7765	3.7469	4.6041	5.5975	8.6101
5	0.1322	0.2672	0.4082	0.5594	0.7267	0.9195	1.1558	1.4759	2.015	2.5706	3.3649	4.0321	4.7733	6.8685
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	5.9587
7	0.1303	0.2632	0.4015	0.5491	0.7111	0.896	1.1192	1.4149	1.8946	2.3646	2.9979	3.4995	4.0294	5.4081
8	0.1297	0.2619	0.3995	0.5459	0.7064	0.8889	1.1081	1.3968	1.8595	2.306	2.8965	3.3554	3.8325	5.0414
9	0.1293	0.261	0.3979	0.5435	0.7027	0.8834	1.0997	1.383	1.8331	2.2622	2.8214	3.2498	3.6896	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	4.5868
11	0.1286	0.2596	0.3956	0.5399	0.6974	0.8755	1.0877	1.3634	1.7959	2.201	2.7181	3.1058	3.4966	4.4369
12	0.1283	0.259	0.3947	0.5386	0.6955	0.8726	1.0832	1.3562	1.7823	2.1788	2.681	3.0545	3.4284	4.3178
13	0.1281	0.2586	0.394	0.5375	0.6938	0.8702	1.0795	1.3502	1.7709	2.1604	2.6503	3.0123	3.3725	4.2209
14	0.128	0.2582	0.3933	0.5366	0.6924	0.8681	1.0763	1.345	1.7613	2.1448	2.6245	2.9768	3.3257	4.1403
15	0.1278	0.2579	0.3928	0.5357	0.6912	0.8662	1.0735	1.3406	1.7531	2.1315	2.6025	2.9467	3.286	4.0728
16	0.1277	0.2576	0.3923	0.535	0.6901	0.8647	1.0711	1.3368	1.7459	2.1199	2.5835	2.9208	3.252	4.0149
17	0.1276	0.2573	0.3919	0.5344	0.6892	0.8633	1.069	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	0.862	1.0672	1.3304	1.7341	2.1009	2.5524	2.8784	3.1966	3.9217
19	0.1274	0.2569	0.3912	0.5333	0.6876	0.861	1.0655	1.3277	1.7291	2.093	2.5395	2.8609	3.1737	3.8833
20	0.1273	0.2567	0.3909	0.5329	0.687	0.86	1.064	1.3253	1.7247	2.086	2.528	2.8453	3.1534	3.8496
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	3.7922

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	3.104	3.7676
24	0.127	0.2562	0.39	0.5314	0.6848	0.8569	1.0593	1.3178	1.7109	2.0639	2.4922	2.797	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	0.256	0.3896	0.5309	0.684	0.8557	1.0575	1.315	1.7056	2.0555	2.4786	2.7787	3.0669	3.7067
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	3.6895
28	0.1268	0.2558	0.3893	0.5304	0.6834	0.8546	1.056	1.3125	1.7011	2.0484	2.4671	2.7633	3.047	3.6739
29	0.1268	0.2557	0.3892	0.5302	0.683	0.8542	1.0553	1.3114	1.6991	2.0452	2.462	2.7564	3.038	3.6595
30	0.1267	0.2556	0.389	0.53	0.6828	0.8538	1.0547	1.3104	1.6973	2.0423	2.4573	2.75	3.0298	3.646
31	0.1267	0.2555	0.3889	0.5298	0.6825	0.8534	1.0541	1.3095	1.6955	2.0395	2.4528	2.744	3.0221	3.6335
32	0.1267	0.2555	0.3888	0.5297	0.6822	0.853	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	0.682	0.8526	1.053	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	1.307	1.6909	2.0322	2.4411	2.7284	3.002	3.6007
35	0.1266	0.2553	0.3885	0.5292	0.6816	0.852	1.052	1.3062	1.6896	2.0301	2.4377	2.7238	2.9961	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	2.9853	3.5737
38	0.1265	0.2551	0.3882	0.5288	0.681	0.8512	1.0508	1.3042	1.686	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	0.255	0.3881	0.5286	0.6807	0.8507	1.05	1.3031	1.6839	2.0211	2.4233	2.7045	2.9712	3.551
41	0.1264	0.255	0.388	0.5285	0.6805	0.8505	1.0497	1.3025	1.6829	2.0195	2.4208	2.7012	2.967	3.5443
42	0.1264	0.255	0.388	0.5284	0.6804	0.8503	1.0494	1.302	1.682	2.0181	2.4185	2.6981	2.963	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	0.68	0.8497	1.0485	1.3007	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	1.0482	1.3002	1.6787	2.0129	2.4102	2.687	2.9488	3.5149
47	0.1263	0.2548	0.3877	0.528	0.6797	0.8493	1.048	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	3.505
49	0.1263	0.2547	0.3876	0.5278	0.6795	0.849	1.0475	1.2991	1.6766	2.0096	2.4049	2.68	2.9397	3.5005
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	2.937	3.496
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	0.678	0.8468	1.0442	1.2938	1.6669	1.9944	2.3808	2.6479	2.8987	3.435
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	2.887	3.4164
90	0.126	0.2541	0.3866	0.5263	0.6772	0.8456	1.0424	1.291	1.662	1.9867	2.3685	2.6316	2.8779	3.4019
100	0.126	0.254	0.3864	0.5261	0.677	0.8452	1.0418	1.2901	1.6602	1.984	2.3642	2.6259	2.8707	3.3905
110	0.126	0.254	0.3863	0.5259	0.6767	0.8449	1.0413	1.2893	1.6588	1.9818	2.3607	2.6213	2.8648	3.3811

120	0.1259	0.2539	0.3862	0.5258	0.6765	0.8446	1.0409	1.2886	1.6576	1.9799	2.3578	2.6174	2.8599	3.3734
130	0.1259	0.2539	0.3862	0.5257	0.6764	0.8444	1.0406	1.2881	1.6567	1.9784	2.3554	2.6142	2.8557	3.367
140	0.1259	0.2538	0.3861	0.5256	0.6762	0.8442	1.0403	1.2876	1.6558	1.9771	2.3533	2.6114	2.8522	3.3613
infini (loi normale)	0.1257	0.2533	0.3853	0.5244	0.6744	0.8416	1.0364	1.2816	1.6449	1.96	2.3264	2.5759	2.8072	3.2908

Table : Loi de Fisher-Snedecor

Valeur f de la variable de Fisher-Snedecor F (ν1 ; ν2) ayant la probabilité 0.05 d'être dépassée



ν1 : degrés de liberté du numérateur

ν2 : degrés de liberté du dénominateur

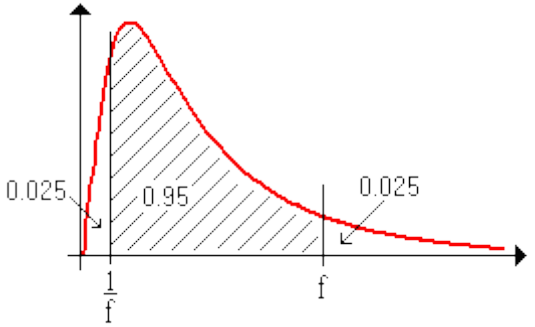
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	35	40	45	50	60	80	100	200	500	1000
1	161.4	199.5	215.7	224.5	230.1	233.9	236.7	238.8	240.5	241.8	242.9	243.9	244.6	245.3	245.9	246.4	246.9	247.3	247.6	248.0	248.5	249.0	249.4	249.8	250.1	250.6	251.1	251.4	251.7	252.2	252.7	253.0	253.6	254.0	254.1
2	18.5	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40	19.40	19.41	19.42	19.42	19.43	19.43	19.44	19.44	19.44	19.45	19.45	19.45	19.46	19.46	19.46	19.47	19.47	19.47	19.48	19.48	19.48	19.49	19.49	19.49	19.49
3	10.1	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79	8.76	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.67	8.66	8.65	8.64	8.63	8.62	8.62	8.60	8.59	8.59	8.58	8.57	8.56	8.55	8.54	8.53	8.53
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96	5.94	5.91	5.89	5.87	5.86	5.84	5.83	5.82	5.81	5.80	5.79	5.77	5.76	5.75	5.75	5.73	5.72	5.71	5.70	5.69	5.67	5.66	5.65	5.64	5.63
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74	4.70	4.68	4.66	4.64	4.62	4.60	4.59	4.58	4.57	4.56	4.54	4.53	4.52	4.50	4.50	4.48	4.46	4.45	4.44	4.43	4.41	4.41	4.39	4.37	4.37
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06	4.03	4.00	3.98	3.96	3.94	3.92	3.91	3.90	3.88	3.87	3.86	3.84	3.83	3.82	3.81	3.79	3.77	3.76	3.75	3.74	3.72	3.71	3.69	3.68	3.67
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64	3.60	3.57	3.55	3.53	3.51	3.49	3.48	3.47	3.46	3.44	3.43	3.41	3.40	3.39	3.38	3.36	3.34	3.33	3.32	3.30	3.29	3.27	3.25	3.24	3.23
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35	3.31	3.28	3.26	3.24	3.22	3.20	3.19	3.17	3.16	3.15	3.13	3.12	3.10	3.09	3.08	3.06	3.04	3.03	3.02	3.01	2.99	2.97	2.95	2.94	2.93
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14	3.10	3.07	3.05	3.03	3.01	2.99	2.97	2.96	2.95	2.94	2.92	2.90	2.89	2.87	2.86	2.84	2.83	2.81	2.80	2.79	2.77	2.76	2.73	2.72	2.71
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98	2.94	2.91	2.89	2.86	2.85	2.83	2.81	2.80	2.79	2.77	2.75	2.74	2.72	2.71	2.70	2.68	2.66	2.65	2.64	2.62	2.60	2.59	2.56	2.55	2.54
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85	2.82	2.79	2.76	2.74	2.72	2.70	2.69	2.67	2.66	2.65	2.63	2.61	2.59	2.58	2.57	2.55	2.53	2.52	2.51	2.49	2.47	2.46	2.43	2.42	2.41
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75	2.72	2.69	2.66	2.64	2.62	2.60	2.58	2.57	2.56	2.54	2.52	2.51	2.49	2.48	2.47	2.44	2.43	2.41	2.40	2.38	2.36	2.35	2.32	2.31	2.30
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67	2.63	2.60	2.58	2.55	2.53	2.51	2.50	2.48	2.47	2.46	2.44	2.42	2.41	2.39	2.38	2.36	2.34	2.33	2.31	2.30	2.27	2.26	2.23	2.22	2.21
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60	2.57	2.53	2.51	2.48	2.46	2.44	2.43	2.41	2.40	2.39	2.37	2.35	2.33	2.32	2.31	2.28	2.27	2.25	2.24	2.22	2.20	2.19	2.16	2.14	2.14
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54	2.51	2.48	2.45	2.42	2.40	2.38	2.37	2.35	2.34	2.33	2.31	2.29	2.27	2.26	2.25	2.22	2.20	2.19	2.18	2.16	2.14	2.12	2.10	2.08	2.07
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49	2.46	2.42	2.40	2.37	2.35	2.33	2.32	2.30	2.29	2.28	2.25	2.24	2.22	2.21	2.19	2.17	2.15	2.14	2.12	2.11	2.08	2.07	2.04	2.02	2.02
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45	2.41	2.38	2.35	2.33	2.31	2.29	2.27	2.26	2.24	2.23	2.21	2.19	2.17	2.16	2.15	2.12	2.10	2.09	2.08	2.06	2.03	2.02	1.99	1.97	1.97
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41	2.37	2.34	2.31	2.29	2.27	2.25	2.23	2.22	2.20	2.19	2.17	2.15	2.13	2.12	2.11	2.08	2.06	2.05	2.04	2.02	1.99	1.98	1.95	1.93	1.92

19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38	2.34	2.31	2.28	2.26	2.23	2.21	2.20	2.18	2.17	2.16	2.13	2.11	2.10	2.08	2.07	2.05	2.03	2.01	2.00	1.98	1.96	1.94	1.91	1.89	1.88
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35	2.31	2.28	2.25	2.22	2.20	2.18	2.17	2.15	2.14	2.12	2.10	2.08	2.07	2.05	2.04	2.01	1.99	1.98	1.97	1.95	1.92	1.91	1.88	1.86	1.85
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32	2.28	2.25	2.22	2.20	2.18	2.16	2.14	2.12	2.11	2.10	2.07	2.05	2.04	2.02	2.01	1.98	1.96	1.95	1.94	1.92	1.89	1.88	1.84	1.83	1.82
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30	2.26	2.23	2.20	2.17	2.15	2.13	2.11	2.10	2.08	2.07	2.05	2.03	2.01	2.00	1.98	1.96	1.94	1.92	1.91	1.89	1.86	1.85	1.82	1.80	1.79
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27	2.24	2.20	2.18	2.15	2.13	2.11	2.09	2.08	2.06	2.05	2.02	2.01	1.99	1.97	1.96	1.93	1.91	1.90	1.88	1.86	1.84	1.82	1.79	1.77	1.76
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25	2.22	2.18	2.15	2.13	2.11	2.09	2.07	2.05	2.04	2.03	2.00	1.98	1.97	1.95	1.94	1.91	1.89	1.88	1.86	1.84	1.82	1.80	1.77	1.75	1.74
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24	2.20	2.16	2.14	2.11	2.09	2.07	2.05	2.04	2.02	2.01	1.98	1.96	1.95	1.93	1.92	1.89	1.87	1.86	1.84	1.82	1.80	1.78	1.75	1.73	1.72
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22	2.18	2.15	2.12	2.09	2.07	2.05	2.03	2.02	2.00	1.99	1.97	1.95	1.93	1.91	1.90	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.73	1.71	1.70
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20	2.17	2.13	2.10	2.08	2.06	2.04	2.02	2.00	1.99	1.97	1.95	1.93	1.91	1.90	1.88	1.86	1.84	1.82	1.81	1.79	1.76	1.74	1.71	1.69	1.68
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19	2.15	2.12	2.09	2.06	2.04	2.02	2.00	1.99	1.97	1.96	1.93	1.91	1.90	1.88	1.87	1.84	1.82	1.80	1.79	1.77	1.74	1.73	1.69	1.67	1.66
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18	2.14	2.10	2.08	2.05	2.03	2.01	1.99	1.97	1.96	1.94	1.92	1.90	1.88	1.87	1.85	1.83	1.81	1.79	1.77	1.75	1.73	1.71	1.67	1.65	1.65
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16	2.13	2.09	2.06	2.04	2.01	1.99	1.98	1.96	1.95	1.93	1.91	1.89	1.87	1.85	1.84	1.81	1.79	1.77	1.76	1.74	1.71	1.70	1.66	1.64	1.63
32	4.15	3.29	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14	2.10	2.07	2.04	2.01	1.99	1.97	1.95	1.94	1.92	1.91	1.88	1.86	1.85	1.83	1.82	1.79	1.77	1.75	1.74	1.71	1.69	1.67	1.63	1.61	1.60
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12	2.08	2.05	2.02	1.99	1.97	1.95	1.93	1.92	1.90	1.89	1.86	1.84	1.82	1.81	1.80	1.77	1.75	1.73	1.71	1.69	1.66	1.65	1.61	1.59	1.58
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11	2.07	2.03	2.00	1.98	1.95	1.93	1.92	1.90	1.88	1.87	1.85	1.82	1.81	1.79	1.78	1.75	1.73	1.71	1.69	1.67	1.64	1.62	1.59	1.56	1.56
38	4.10	3.24	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09	2.05	2.02	1.99	1.96	1.94	1.92	1.90	1.88	1.87	1.85	1.83	1.81	1.79	1.77	1.76	1.73	1.71	1.69	1.68	1.65	1.62	1.61	1.57	1.54	1.54
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08	2.04	2.00	1.97	1.95	1.92	1.90	1.89	1.87	1.85	1.84	1.81	1.79	1.77	1.76	1.74	1.72	1.69	1.67	1.66	1.64	1.61	1.59	1.55	1.53	1.52
42	4.07	3.22	2.83	2.59	2.44	2.32	2.24	2.17	2.11	2.06	2.03	1.99	1.96	1.94	1.91	1.89	1.87	1.86	1.84	1.83	1.80	1.78	1.76	1.75	1.73	1.70	1.68	1.66	1.65	1.62	1.59	1.57	1.53	1.51	1.50
44	4.06	3.21	2.82	2.58	2.43	2.31	2.23	2.16	2.10	2.05	2.01	1.98	1.95	1.92	1.90	1.88	1.86	1.84	1.83	1.81	1.79	1.77	1.75	1.73	1.72	1.69	1.67	1.65	1.63	1.61	1.58	1.56	1.52	1.49	1.49
46	4.05	3.20	2.81	2.57	2.42	2.30	2.22	2.15	2.09	2.04	2.00	1.97	1.94	1.91	1.89	1.87	1.85	1.83	1.82	1.80	1.78	1.76	1.74	1.72	1.71	1.68	1.65	1.64	1.62	1.60	1.57	1.55	1.51	1.48	1.47
48	4.04	3.19	2.80	2.57	2.41	2.29	2.21	2.14	2.08	2.03	1.99	1.96	1.93	1.90	1.88	1.86	1.84	1.82	1.81	1.79	1.77	1.75	1.73	1.71	1.70	1.67	1.64	1.62	1.61	1.59	1.56	1.54	1.49	1.47	1.46
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07	2.03	1.99	1.95	1.92	1.89	1.87	1.85	1.83	1.81	1.80	1.78	1.76	1.74	1.72	1.70	1.69	1.66	1.63	1.61	1.60	1.58	1.54	1.52	1.48	1.46	1.45
55	4.02	3.16	2.77	2.54	2.38	2.27	2.18	2.11	2.06	2.01	1.97	1.93	1.90	1.88	1.85	1.83	1.81	1.79	1.78	1.76	1.74	1.72	1.70	1.68	1.67	1.64	1.61	1.59	1.58	1.55	1.52	1.50	1.46	1.43	1.42
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10	2.04	1.99	1.95	1.92	1.89	1.86	1.84	1.82	1.80	1.78	1.76	1.75	1.72	1.70	1.68	1.66	1.65	1.62	1.59	1.57	1.56	1.53	1.50	1.48	1.44	1.41	1.40
65	3.99	3.14	2.75	2.51	2.36	2.24	2.15	2.08	2.03	1.98	1.94	1.90	1.87	1.85	1.82	1.80	1.78	1.76	1.75	1.73	1.71	1.69	1.67	1.65	1.63	1.60	1.58	1.56	1.54	1.52	1.49	1.46	1.42	1.39	1.38
70	3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02	1.97	1.93	1.89	1.86	1.84	1.81	1.79	1.77	1.75	1.74	1.72	1.70	1.67	1.65	1.64	1.62	1.59	1.57	1.55	1.53	1.50	1.47	1.45	1.40	1.37	1.36
75	3.97	3.12	2.73	2.49	2.34	2.22	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.83	1.80	1.78	1.76	1.74	1.73	1.71	1.69	1.66	1.64	1.63	1.61	1.58	1.55	1.53	1.52	1.49	1.46	1.44	1.39	1.36	1.35
80	3.96	3.11	2.72	2.49	2.33	2.21	2.13	2.06	2.00	1.95	1.91	1.88	1.84	1.82	1.79	1.77	1.75	1.73	1.72	1.70	1.68	1.65	1.63	1.62	1.60	1.57	1.54	1.52	1.51	1.48	1.45	1.43	1.38	1.35	1.34
85	3.95	3.10	2.71	2.48	2.32	2.21	2.12	2.05	1.99	1.94	1.90	1.87	1.84	1.81	1.79	1.76	1.74	1.73	1.71	1.70	1.67	1.65	1.63	1.61	1.59	1.56	1.54	1.52	1.50	1.47	1.44	1.42	1.37	1.34	1.32
90	3.95	3.10	2.71	2.47	2.32	2.20	2.11	2.04	1.99	1.94	1.90	1.86	1.83	1.80	1.78	1.76	1.74	1.72	1.70	1.69	1.66	1.64	1.62	1.60	1.59	1.55	1.53	1.51	1.49	1.46	1.43	1.41	1.36	1.33	1.31
95	3.94	3.09	2.70	2.47	2.31	2.20	2.11	2.04	1.98	1.93	1.89	1.86	1.82	1.80	1.77	1.75	1.73	1.71	1.70	1.68	1.66	1.63	1.61	1.59	1.58	1.55	1.52	1.50	1.48	1.46	1.42	1.40	1.35	1.32	1.30
100	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97	1.93	1.89	1.85	1.82	1.79	1.77	1.75	1.73	1.71	1.69	1.68	1.65	1.63	1.61	1.59	1.57	1.54	1.52	1.49	1.48	1.45	1.41	1.39	1.34	1.31	1.30
125	3.92	3.07	2.68	2.44	2.29	2.17	2.08	2.01	1.96	1.91	1.87	1.83	1.80	1.77	1.75	1.73	1.71	1.69	1.67	1.66	1.63	1.60	1.58	1.57	1.55	1.52	1.49	1.47	1.45	1.42	1.39	1.36	1.31	1.27	1.26
150	3.90	3.06	2.66	2.43	2.27	2.16	2.07	2.00	1.94	1.89	1.85	1.82	1.79	1.76	1.73	1.71	1.69	1.67	1.66	1.64	1.61	1.59	1.57	1.55	1.54	1.50	1.48	1.45	1.44	1.41	1.37	1.34	1.29	1.25	1.24
200	3.89	3.04	2.65	2.42	2.26	2.14	2.06	1.98	1.93	1.88	1.84	1.80	1.77	1.74	1.72	1.69	1.67	1.66	1.64	1.62	1.60	1.57	1.55	1.53	1.52	1.48	1.46	1.43	1.41	1.39	1.35	1.32	1.26	1.22	1.21
300	3.87	3.03	2.63	2.40	2.24	2.13	2.04	1.97	1.91	1.86	1.82	1.78	1.75	1.72	1.70	1.68	1.66	1.64	1.62	1.61	1.58	1.55	1.53	1.51	1.50	1.46	1.43	1.41	1.39	1.36	1.32	1.30	1.23	1.19	1.17
500	3.86	3.01	2.62	2.39	2.23	2.12	2.03	1.96	1.90	1.85	1.81	1.77	1.74	1.71	1.69	1.66	1.64	1.62	1.61	1.59	1.56	1.54	1.52	1.50	1.48	1.45	1.42	1.40	1.38	1.35	1.30	1.28	1.21	1.16	1.14

1000	3.85	3.00	2.61	2.38	2.22	2.11	2.02	1.95	1.89	1.84	1.80	1.76	1.73	1.70	1.68	1.65	1.63	1.61	1.60	1.58	1.55	1.53	1.51	1.49	1.47	1.43	1.41	1.38	1.36	1.33	1.29	1.26	1.19	1.13	1.11
2000	3.85	3.00	2.61	2.38	2.22	2.10	2.01	1.94	1.88	1.84	1.79	1.76	1.73	1.70	1.67	1.65	1.63	1.61	1.59	1.58	1.55	1.52	1.50	1.48	1.46	1.43	1.40	1.38	1.36	1.32	1.28	1.25	1.18	1.12	1.09

Table : Loi de Fisher-Snedecor

Valeur f de la variable de Fisher-Snedecor F (ν1 ; ν2) ayant la probabilité 0.025 d'être dépassée



ν1 : degrés de liberté du numérateur

ν2 : degrés de liberté du dénominateur

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	28	30	35	40	45	50	60	80	100	200	500	2000
1	647.79	799.48	864.15	899.60	921.83	937.11	948.20	956.64	963.28	968.63	973.03	976.72	979.84	982.55	984.87	986.91	988.72	990.35	991.80	993.08	995.35	997.27	998.84	1000.24	1001.40	1003.79	1005.60	1006.99	1008.10	1009.79	1011.91	1013.16	1015.72	1017.24	1017.99
2	38.51	39.00	39.17	39.25	39.30	39.33	39.36	39.37	39.39	39.40	39.41	39.41	39.42	39.43	39.43	39.44	39.44	39.44	39.45	39.45	39.45	39.46	39.46	39.46	39.46	39.47	39.47	39.48	39.48	39.48	39.49	39.49	39.49	39.50	39.50
3	17.44	16.04	15.44	15.10	14.88	14.73	14.62	14.54	14.47	14.42	14.37	14.34	14.30	14.28	14.25	14.23	14.21	14.20	14.18	14.17	14.14	14.12	14.11	14.09	14.08	14.06	14.04	14.02	14.01	13.99	13.97	13.96	13.93	13.91	13.90
4	12.22	10.65	9.98	9.60	9.36	9.20	9.07	8.98	8.90	8.84	8.79	8.75	8.72	8.68	8.66	8.63	8.61	8.59	8.58	8.56	8.53	8.51	8.49	8.48	8.46	8.43	8.41	8.39	8.38	8.36	8.33	8.32	8.29	8.27	8.26
5	10.01	8.43	7.76	7.39	7.15	6.98	6.85	6.76	6.68	6.62	6.57	6.52	6.49	6.46	6.43	6.40	6.38	6.36	6.34	6.33	6.30	6.28	6.26	6.24	6.23	6.20	6.18	6.16	6.14	6.12	6.10	6.08	6.05	6.03	6.02
6	8.81	7.26	6.60	6.23	5.99	5.82	5.70	5.60	5.52	5.46	5.41	5.37	5.33	5.30	5.27	5.24	5.22	5.20	5.18	5.17	5.14	5.12	5.10	5.08	5.07	5.04	5.01	4.99	4.98	4.96	4.93	4.92	4.88	4.86	4.85
7	8.07	6.54	5.89	5.52	5.29	5.12	4.99	4.90	4.82	4.76	4.71	4.67	4.63	4.60	4.57	4.54	4.52	4.50	4.48	4.47	4.44	4.41	4.39	4.38	4.36	4.33	4.31	4.29	4.28	4.25	4.23	4.21	4.18	4.16	4.15
8	7.57	6.06	5.42	5.05	4.82	4.65	4.53	4.43	4.36	4.30	4.24	4.20	4.16	4.13	4.10	4.08	4.05	4.03	4.02	4.00	3.97	3.95	3.93	3.91	3.89	3.86	3.84	3.82	3.81	3.78	3.76	3.74	3.70	3.68	3.67
9	7.21	5.71	5.08	4.72	4.48	4.32	4.20	4.10	4.03	3.96	3.91	3.87	3.83	3.80	3.77	3.74	3.72	3.70	3.68	3.67	3.64	3.61	3.59	3.58	3.56	3.53	3.51	3.49	3.47	3.45	3.42	3.40	3.37	3.35	3.34
10	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.78	3.72	3.66	3.62	3.58	3.55	3.52	3.50	3.47	3.45	3.44	3.42	3.39	3.37	3.34	3.33	3.31	3.28	3.26	3.24	3.22	3.20	3.17	3.15	3.12	3.09	3.08
11	6.72	5.26	4.63	4.28	4.04	3.88	3.76	3.66	3.59	3.53	3.47	3.43	3.39	3.36	3.33	3.30	3.28	3.26	3.24	3.23	3.20	3.17	3.15	3.13	3.12	3.09	3.06	3.04	3.03	3.00	2.97	2.96	2.92	2.90	2.89
12	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.44	3.37	3.32	3.28	3.24	3.21	3.18	3.15	3.13	3.11	3.09	3.07	3.04	3.02	3.00	2.98	2.96	2.93	2.91	2.89	2.87	2.85	2.82	2.80	2.76	2.74	2.73
13	6.41	4.97	4.35	4.00	3.77	3.60	3.48	3.39	3.31	3.25	3.20	3.15	3.12	3.08	3.05	3.03	3.00	2.98	2.96	2.95	2.92	2.89	2.87	2.85	2.84	2.80	2.78	2.76	2.74	2.72	2.69	2.67	2.63	2.61	2.60
14	6.30	4.86	4.24	3.89	3.66	3.50	3.38	3.29	3.21	3.15	3.09	3.05	3.01	2.98	2.95	2.92	2.90	2.88	2.86	2.84	2.81	2.79	2.77	2.75	2.73	2.70	2.67	2.65	2.64	2.61	2.58	2.56	2.53	2.50	2.49
15	6.20	4.77	4.15	3.80	3.58	3.41	3.29	3.20	3.12	3.06	3.01	2.96	2.92	2.89	2.86	2.84	2.81	2.79	2.77	2.76	2.73	2.70	2.68	2.66	2.64	2.61	2.59	2.56	2.55	2.52	2.49	2.47	2.44	2.41	2.40
16	6.12	4.69	4.08	3.73	3.50	3.34	3.22	3.12	3.05	2.99	2.93	2.89	2.85	2.82	2.79	2.76	2.74	2.72	2.70	2.68	2.65	2.63	2.60	2.58	2.57	2.53	2.51	2.49	2.47	2.45	2.42	2.40	2.36	2.33	2.32
17	6.04	4.62	4.01	3.66	3.44	3.28	3.16	3.06	2.98	2.92	2.87	2.82	2.79	2.75	2.72	2.70	2.67	2.65	2.63	2.62	2.59	2.56	2.54	2.52	2.50	2.47	2.44	2.42	2.41	2.38	2.35	2.33	2.29	2.26	2.25

18	5.98	4.56	3.95	3.61	3.38	3.22	3.10	3.01	2.93	2.87	2.81	2.77	2.73	2.70	2.67	2.64	2.62	2.60	2.58	2.56	2.53	2.50	2.48	2.46	2.44	2.41	2.38	2.36	2.35	2.32	2.29	2.27	2.23	2.20	2.19
19	5.92	4.51	3.90	3.56	3.33	3.17	3.05	2.96	2.88	2.82	2.76	2.72	2.68	2.65	2.62	2.59	2.57	2.55	2.53	2.51	2.48	2.45	2.43	2.41	2.39	2.36	2.33	2.31	2.30	2.27	2.24	2.22	2.18	2.15	2.14
20	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.84	2.77	2.72	2.68	2.64	2.60	2.57	2.55	2.52	2.50	2.48	2.46	2.43	2.41	2.39	2.37	2.35	2.31	2.29	2.27	2.25	2.22	2.19	2.17	2.13	2.10	2.09
21	5.83	4.42	3.82	3.48	3.25	3.09	2.97	2.87	2.80	2.73	2.68	2.64	2.60	2.56	2.53	2.51	2.48	2.46	2.44	2.42	2.39	2.37	2.34	2.33	2.31	2.27	2.25	2.23	2.21	2.18	2.15	2.13	2.09	2.06	2.05
22	5.79	4.38	3.78	3.44	3.22	3.05	2.93	2.84	2.76	2.70	2.65	2.60	2.56	2.53	2.50	2.47	2.45	2.43	2.41	2.39	2.36	2.33	2.31	2.29	2.27	2.24	2.21	2.19	2.17	2.14	2.11	2.09	2.05	2.02	2.01
23	5.75	4.35	3.75	3.41	3.18	3.02	2.90	2.81	2.73	2.67	2.62	2.57	2.53	2.50	2.47	2.44	2.42	2.39	2.37	2.36	2.33	2.30	2.28	2.26	2.24	2.20	2.18	2.15	2.14	2.11	2.08	2.06	2.01	1.99	1.97
24	5.72	4.32	3.72	3.38	3.15	2.99	2.87	2.78	2.70	2.64	2.59	2.54	2.50	2.47	2.44	2.41	2.39	2.36	2.35	2.33	2.30	2.27	2.25	2.23	2.21	2.17	2.15	2.12	2.11	2.08	2.05	2.02	1.98	1.95	1.94
25	5.69	4.29	3.69	3.35	3.13	2.97	2.85	2.75	2.68	2.61	2.56	2.51	2.48	2.44	2.41	2.38	2.36	2.34	2.32	2.30	2.27	2.24	2.22	2.20	2.18	2.15	2.12	2.10	2.08	2.05	2.02	2.00	1.95	1.92	1.91
26	5.66	4.27	3.67	3.33	3.10	2.94	2.82	2.73	2.65	2.59	2.54	2.49	2.45	2.42	2.39	2.36	2.34	2.31	2.29	2.28	2.24	2.22	2.19	2.17	2.16	2.12	2.09	2.07	2.05	2.03	1.99	1.97	1.92	1.90	1.88
27	5.63	4.24	3.65	3.31	3.08	2.92	2.80	2.71	2.63	2.57	2.51	2.47	2.43	2.39	2.36	2.34	2.31	2.29	2.27	2.25	2.22	2.19	2.17	2.15	2.13	2.10	2.07	2.05	2.03	2.00	1.97	1.94	1.90	1.87	1.86
28	5.61	4.22	3.63	3.29	3.06	2.90	2.78	2.69	2.61	2.55	2.49	2.45	2.41	2.37	2.34	2.32	2.29	2.27	2.25	2.23	2.20	2.17	2.15	2.13	2.11	2.08	2.05	2.03	2.01	1.98	1.94	1.92	1.88	1.85	1.83
29	5.59	4.20	3.61	3.27	3.04	2.88	2.76	2.67	2.59	2.53	2.48	2.43	2.39	2.36	2.32	2.30	2.27	2.25	2.23	2.21	2.18	2.15	2.13	2.11	2.09	2.06	2.03	2.01	1.99	1.96	1.92	1.90	1.86	1.83	1.81
30	5.57	4.18	3.59	3.25	3.03	2.87	2.75	2.65	2.57	2.51	2.46	2.41	2.37	2.34	2.31	2.28	2.26	2.23	2.21	2.20	2.16	2.14	2.11	2.09	2.07	2.04	2.01	1.99	1.97	1.94	1.90	1.88	1.84	1.81	1.79
32	5.53	4.15	3.56	3.22	3.00	2.84	2.71	2.62	2.54	2.48	2.43	2.38	2.34	2.31	2.28	2.25	2.22	2.20	2.18	2.16	2.13	2.10	2.08	2.06	2.04	2.00	1.98	1.95	1.93	1.91	1.87	1.85	1.80	1.77	1.75
34	5.50	4.12	3.53	3.19	2.97	2.81	2.69	2.59	2.52	2.45	2.40	2.35	2.31	2.28	2.25	2.22	2.20	2.17	2.15	2.13	2.10	2.07	2.05	2.03	2.01	1.97	1.95	1.92	1.90	1.88	1.84	1.82	1.77	1.74	1.72
36	5.47	4.09	3.50	3.17	2.94	2.78	2.66	2.57	2.49	2.43	2.37	2.33	2.29	2.25	2.22	2.20	2.17	2.15	2.13	2.11	2.08	2.05	2.03	2.00	1.99	1.95	1.92	1.90	1.88	1.85	1.81	1.79	1.74	1.71	1.69
38	5.45	4.07	3.48	3.15	2.92	2.76	2.64	2.55	2.47	2.41	2.35	2.31	2.27	2.23	2.20	2.17	2.15	2.13	2.11	2.09	2.05	2.03	2.00	1.98	1.96	1.93	1.90	1.87	1.85	1.82	1.79	1.76	1.71	1.68	1.67
40	5.42	4.05	3.46	3.13	2.90	2.74	2.62	2.53	2.45	2.39	2.33	2.29	2.25	2.21	2.18	2.15	2.13	2.11	2.09	2.07	2.03	2.01	1.98	1.96	1.94	1.90	1.88	1.85	1.83	1.80	1.76	1.74	1.69	1.66	1.64
42	5.40	4.03	3.45	3.11	2.89	2.73	2.61	2.51	2.43	2.37	2.32	2.27	2.23	2.20	2.16	2.14	2.11	2.09	2.07	2.05	2.02	1.99	1.96	1.94	1.92	1.89	1.86	1.83	1.81	1.78	1.74	1.72	1.67	1.64	1.62
44	5.39	4.02	3.43	3.09	2.87	2.71	2.59	2.50	2.42	2.36	2.30	2.26	2.22	2.18	2.15	2.12	2.10	2.07	2.05	2.03	2.00	1.97	1.95	1.93	1.91	1.87	1.84	1.82	1.80	1.77	1.73	1.70	1.65	1.62	1.60
46	5.37	4.00	3.42	3.08	2.86	2.70	2.58	2.48	2.41	2.34	2.29	2.24	2.20	2.17	2.13	2.11	2.08	2.06	2.04	2.02	1.99	1.96	1.93	1.91	1.89	1.85	1.82	1.80	1.78	1.75	1.71	1.69	1.63	1.60	1.58
48	5.35	3.99	3.40	3.07	2.84	2.69	2.56	2.47	2.39	2.33	2.27	2.23	2.19	2.15	2.12	2.09	2.07	2.05	2.02	2.01	1.97	1.94	1.92	1.90	1.88	1.84	1.81	1.79	1.77	1.73	1.69	1.67	1.62	1.58	1.57
50	5.34	3.97	3.39	3.05	2.83	2.67	2.55	2.46	2.38	2.32	2.26	2.22	2.18	2.14	2.11	2.08	2.06	2.03	2.01	1.99	1.96	1.93	1.91	1.89	1.87	1.83	1.80	1.77	1.75	1.72	1.68	1.66	1.60	1.57	1.55
55	5.31	3.95	3.36	3.03	2.81	2.65	2.53	2.43	2.36	2.29	2.24	2.19	2.15	2.11	2.08	2.05	2.03	2.01	1.99	1.97	1.93	1.90	1.88	1.86	1.84	1.80	1.77	1.74	1.72	1.69	1.65	1.62	1.57	1.54	1.52
60	5.29	3.93	3.34	3.01	2.79	2.63	2.51	2.41	2.33	2.27	2.22	2.17	2.13	2.09	2.06	2.03	2.01	1.98	1.96	1.94	1.91	1.88	1.86	1.83	1.82	1.78	1.74	1.72	1.70	1.67	1.63	1.60	1.54	1.51	1.49
65	5.26	3.91	3.32	2.99	2.77	2.61	2.49	2.39	2.32	2.25	2.20	2.15	2.11	2.07	2.04	2.01	1.99	1.97	1.95	1.93	1.89	1.86	1.84	1.82	1.80	1.76	1.72	1.70	1.68	1.65	1.60	1.58	1.52	1.48	1.46
70	5.25	3.89	3.31	2.97	2.75	2.59	2.47	2.38	2.30	2.24	2.18	2.14	2.10	2.06	2.03	2.00	1.97	1.95	1.93	1.91	1.88	1.85	1.82	1.80	1.78	1.74	1.71	1.68	1.66	1.63	1.59	1.56	1.50	1.46	1.44
75	5.23	3.88	3.30	2.96	2.74	2.58	2.46	2.37	2.29	2.22	2.17	2.12	2.08	2.05	2.01	1.99	1.96	1.94	1.92	1.90	1.86	1.83	1.81	1.78	1.76	1.72	1.69	1.67	1.65	1.61	1.57	1.54	1.48	1.44	1.42
80	5.22	3.86	3.28	2.95	2.73	2.57	2.45	2.35	2.28	2.21	2.16	2.11	2.07	2.03	2.00	1.97	1.95	1.92	1.90	1.88	1.85	1.82	1.79	1.77	1.75	1.71	1.68	1.65	1.63	1.60	1.55	1.53	1.47	1.43	1.41
85	5.21	3.85	3.27	2.94	2.72	2.56	2.44	2.35	2.27	2.20	2.15	2.10	2.06	2.02	1.99	1.96	1.94	1.91	1.89	1.87	1.84	1.81	1.78	1.76	1.74	1.70	1.67	1.64	1.62	1.59	1.54	1.51	1.45	1.41	1.39
90	5.20	3.84	3.26	2.93	2.71	2.55	2.43	2.34	2.26	2.19	2.14	2.09	2.05	2.02	1.98	1.95	1.93	1.91	1.88	1.86	1.83	1.80	1.77	1.75	1.73	1.69	1.66	1.63	1.61	1.58	1.53	1.50	1.44	1.40	1.38
95	5.19	3.84	3.26	2.92	2.70	2.54	2.42	2.33	2.25	2.19	2.13	2.08	2.04	2.01	1.98	1.95	1.92	1.90	1.88	1.86	1.82	1.79	1.77	1.74	1.72	1.68	1.65	1.62	1.60	1.57	1.52	1.49	1.43	1.39	1.37
100	5.18	3.83	3.25	2.92	2.70	2.54	2.42	2.32	2.24	2.18	2.12	2.08	2.04	2.00	1.97	1.94	1.91	1.89	1.87	1.85	1.81	1.78	1.76	1.74	1.71	1.67	1.64	1.61	1.59	1.56	1.51	1.48	1.42	1.38	1.36
125	5.15	3.80	3.22	2.89	2.67	2.51	2.39	2.30	2.22	2.15	2.10	2.05	2.01	1.97	1.94	1.91	1.89	1.86	1.84	1.82	1.79	1.75	1.73	1.71	1.68	1.64	1.61	1.58	1.56	1.52	1.48	1.45	1.38	1.34	1.31
150	5.13	3.78	3.20	2.87	2.65	2.49	2.37	2.28	2.20	2.13	2.08	2.03	1.99	1.95	1.92	1.89	1.87	1.84	1.82	1.80	1.77	1.74	1.71	1.69	1.67	1.62	1.59	1.56	1.54	1.50	1.45	1.42	1.35	1.31	1.28
200	5.10	3.76	3.18	2.85	2.63	2.47	2.35	2.26	2.18	2.11	2.06	2.01	1.97	1.93	1.90	1.87	1.84	1.82	1.80	1.78	1.74	1.71	1.68	1.66	1.64	1.60	1.56	1.53	1.51	1.47	1.42	1.39	1.32	1.27	1.24
300	5.07	3.73	3.16	2.83	2.61	2.45	2.33	2.23	2.16	2.09	2.04	1.99	1.95	1.91	1.88	1.85	1.82	1.80	1.77	1.75	1.72	1.69	1.66	1.64	1.62	1.57	1.54	1.51	1.48	1.45	1.39	1.36	1.28	1.23	1.19
500	5.05	3.72	3.14	2.81	2.59	2.43	2.31	2.22	2.14	2.07	2.02	1.97	1.93	1.89	1.86	1.83	1.80	1.78	1.76	1.74	1.70	1.67	1.64	1.62	1.60	1.55	1.52	1.49	1.46	1.42	1.37	1.34	1.25	1.19	1.15
1000	5.04	3.70	3.13	2.80	2.58	2.42	2.30	2.20	2.13	2.06	2.01	1.96	1.92	1.88	1.85	1.82	1.79	1.77	1.74	1.72	1.69	1.65	1.63	1.60	1.58	1.54	1.50	1.47	1.45	1.41	1.35	1.32	1.23	1.16	1.11

2000	5.03	3.70	3.12	2.79	2.57	2.41	2.29	2.20	2.12	2.05	2.00	1.95	1.91	1.87	1.84	1.81	1.78	1.76	1.74	1.72	1.68	1.65	1.62	1.60	1.57	1.53	1.49	1.46	1.44	1.40	1.34	1.31	1.22	1.15	1