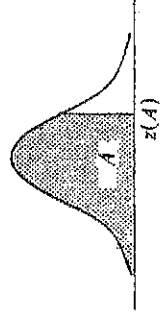


Percentiles of the F-Distribution.

Entry is area A under the standard normal curve from $-\infty$ to $z(A)$.



z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
10	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
11	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
12	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
13	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
14	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
15	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
16	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
17	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
18	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
19	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
20	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
21	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
22	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
23	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
24	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
25	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
26	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
27	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
28	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
29	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
30	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
31	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
32	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
33	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9997	.9997
34	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

Cumulative probability A:	Selected Percentiles									
	.90	.95	.975	.98	.99	.995	.999			
$z(A)$:	1.282	1.645	1.960	2.054	2.326	2.576	3.090			

Den. df	Numerator df									
	1	2	3	4	5	6	7	8	9	
8	0.499	0.757	0.860	0.915	0.948	0.971	0.988	1.00	1.01	
9	3.46	3.11	2.92	2.81	2.73	2.67	2.62	2.59	2.56	
10	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	
11	7.57	6.06	5.42	5.05	4.82	4.65	4.53	4.43	4.36	
12	11.3	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91	
13	14.7	11.0	9.60	8.81	8.30	7.95	7.69	7.50	7.34	
14	25.4	18.5	15.8	14.4	13.5	12.9	12.4	12.0	11.8	
15	0.494	0.749	0.852	0.906	0.939	0.962	0.978	0.990	1.00	
16	3.36	3.01	2.81	2.69	2.61	2.55	2.51	2.47	2.44	
17	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	
18	7.21	5.71	5.08	4.72	4.48	4.32	4.20	4.10	4.03	
19	10.6	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35	
20	13.6	10.1	8.72	7.96	7.47	7.13	6.88	6.69	6.54	
21	22.9	16.4	13.9	12.6	11.7	11.1	10.7	10.4	10.1	
22	0.490	0.743	0.845	0.899	0.932	0.954	0.971	0.983	0.992	
23	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.35	
24	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	
25	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.78	
26	10.0	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94	
27	12.8	9.43	8.08	7.34	6.87	6.54	6.30	6.12	5.97	
28	21.0	14.9	12.6	11.3	10.5	9.93	9.52	9.20	8.96	
29	0.484	0.735	0.835	0.888	0.921	0.943	0.959	0.972	0.981	
30	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.21	
31	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	
32	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.44	
33	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.39	
34	11.8	8.51	7.23	6.52	6.07	5.76	5.52	5.35	5.20	
35	18.6	13.0	10.8	9.63	8.89	8.38	8.00	7.71	7.48	
36	0.478	0.726	0.826	0.878	0.911	0.933	0.949	0.960	0.970	
37	3.07	2.70	2.49	2.36	2.27	2.21	2.16	2.12	2.09	
38	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	
39	6.20	4.77	4.15	3.80	3.58	3.41	3.29	3.20	3.12	
40	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.89	
41	10.8	7.70	6.48	5.80	5.37	5.07	4.85	4.67	4.54	
42	16.6	11.3	9.34	8.25	7.57	7.09	6.74	6.47	6.26	
43	0.472	0.718	0.816	0.868	0.900	0.922	0.938	0.950	0.959	
44	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.96	
45	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	
46	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.84	
47	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46	
48	9.94	6.99	5.82	5.17	4.76	4.47	4.26	4.09	3.96	
49	14.8	9.95	8.10	7.10	6.46	6.02	5.69	5.44	5.24	
50	0.435	0.693	0.789	0.839	0.870	0.891	0.907	0.918	0.927	
51	2.71	2.30	2.08	1.94	1.85	1.77	1.72	1.67	1.63	
52	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88	
53	5.02	3.69	3.12	2.79	2.57	2.41	2.29	2.19	2.11	
54	6.63	4.61	3.78	3.32	3.02	2.80	2.64	2.51	2.41	
55	7.88	5.30	4.28	3.72	3.35	3.09	2.90	2.74	2.62	
56	10.8	6.91	5.42	4.62	4.10	3.74	3.47	3.27	3.10	

15.5 F Table

Tabled values are $F(0.95, k, d)$ where $P(F < F(0.95, k, d)) = 0.95$.

00 stands for ∞ . Entries produced with the `qf(.95, k, d)` command in *R*. The numerator degrees of freedom are k while the denominator degrees of freedom are d .

k	1	2	3	4	5	6	7	8	9	00
d										
1	161	200	216	225	230	234	237	239	241	254
2	18.5	19.0	19.2	19.3	19.3	19.3	19.4	19.4	19.4	19.5
3	10.1	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.53
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.63
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.37
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	3.67
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.23
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	2.93
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	2.71
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.54
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.41
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.30
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.21
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.13
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.07
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.01
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	1.96
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	1.92
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	1.88
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	1.84
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	1.71
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	1.62
00	3.84	3.00	2.61	2.37	2.21	2.10	2.01	1.94	1.88	1.00