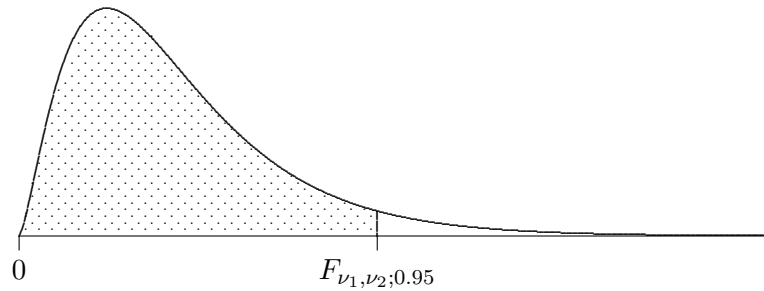


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F Distribution: 95% Quantiles ($\alpha = 5\%$)



The F distribution

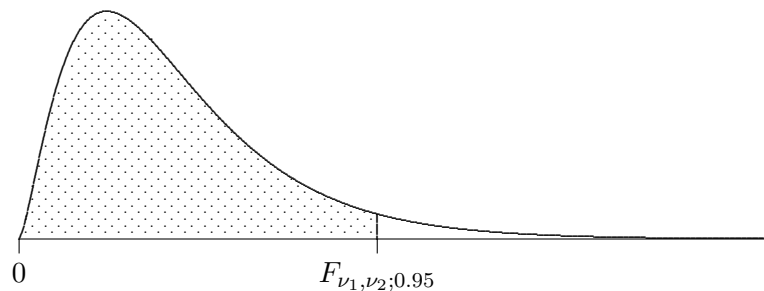
The entries in the following table are the 95% quantiles of the F distribution with ν_1 (numerator) and ν_2 (denominator) degrees of freedom, i.e. the area between the abscissa and the curve on the left side of $F_{\nu_1, \nu_2; 0.95}$ equals 0.95.

denominator d.f., ν_2	numerator d.f., ν_1							
	1	2	3	4	5	6	7	8
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07
11	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59
17	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55
18	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45
21	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18
60	4.00	3.15	2.76	2.53	2.37	2.25	2.17	2.10
120	3.92	3.07	2.68	2.45	2.29	2.18	2.09	2.02
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94

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F Distribution: 95% Quantiles ($\alpha = 5\%$) (ctd.)



The F distribution

The entries in the following table are the 95% quantiles of the F distribution with ν_1 (numerator) and ν_2 (denominator) degrees of freedom, i.e. the area between the abscissa and the curve on the left side of $F_{\nu_1, \nu_2; 0.95}$ equals 0.95.

denominator d.f., ν_2	numerator d.f., ν_1						
	9	10	15	20	30	40	∞
1	240.54	241.88	245.95	248.01	250.10	251.14	254.31
2	19.38	19.40	19.43	19.45	19.46	19.47	19.50
3	8.81	8.79	8.70	8.66	8.62	8.59	8.53
4	6.00	5.96	5.86	5.80	5.75	5.72	5.63
5	4.77	4.74	4.62	4.56	4.50	4.46	4.36
6	4.10	4.06	3.94	3.87	3.81	3.77	3.67
7	3.68	3.64	3.51	3.44	3.38	3.34	3.23
8	3.39	3.35	3.22	3.15	3.08	3.04	2.93
9	3.18	3.14	3.01	2.94	2.86	2.83	2.71
10	3.02	2.98	2.85	2.77	2.70	2.66	2.54
11	2.90	2.85	2.72	2.65	2.57	2.53	2.40
12	2.80	2.75	2.62	2.54	2.47	2.43	2.30
13	2.71	2.67	2.53	2.46	2.38	2.34	2.21
14	2.65	2.60	2.46	2.39	2.31	2.27	2.13
15	2.59	2.54	2.40	2.33	2.25	2.20	2.07
16	2.54	2.49	2.35	2.28	2.19	2.15	2.01
17	2.49	2.45	2.31	2.23	2.15	2.10	1.96
18	2.46	2.41	2.27	2.19	2.11	2.06	1.92
19	2.42	2.38	2.23	2.16	2.07	2.03	1.88
20	2.39	2.35	2.20	2.12	2.04	1.99	1.84
21	2.37	2.32	2.18	2.10	2.01	1.96	1.81
22	2.34	2.30	2.15	2.07	1.98	1.94	1.78
23	2.32	2.27	2.13	2.05	1.96	1.91	1.76
24	2.30	2.25	2.11	2.03	1.94	1.89	1.73
25	2.28	2.24	2.09	2.01	1.92	1.87	1.71
30	2.21	2.16	2.01	1.93	1.84	1.79	1.62
40	2.12	2.08	1.92	1.84	1.74	1.69	1.51
60	2.04	1.99	1.84	1.75	1.65	1.59	1.39
120	1.96	1.91	1.75	1.66	1.55	1.50	1.25
∞	1.88	1.83	1.67	1.57	1.46	1.39	—