

F Distribution Table for $\alpha = 0.005$

Upper-tail F critical values

df.	Numerator df.																	
	1	2	3	4	5	6	7	8	9	10	12	15	20	24	30	40	60	120
1	16210.723	19999.500	21614.741	22499.583	23055.798	23437.111	23714.566	23925.406	24091.004	24224.487	24426.366	24630.205	24835.971	24939.565	25043.628	25148.153	25253.137	25358.573
2	198.501	199.000	199.166	199.250	199.300	199.333	199.357	199.375	199.388	199.400	199.416	199.433	199.450	199.458	199.466	199.475	199.483	199.491
3	55.552	49.799	47.467	46.195	45.392	44.838	44.434	44.126	43.882	43.686	43.387	43.085	42.778	42.622	42.466	42.308	42.149	41.989
4	31.333	26.284	24.259	23.155	22.456	21.975	21.622	21.352	21.139	20.967	20.705	20.438	20.167	20.030	19.892	19.752	19.611	19.468
5	22.785	18.314	16.530	15.556	14.940	14.513	14.200	13.961	13.772	13.618	13.384	13.146	12.903	12.780	12.656	12.530	12.402	12.274
6	18.635	14.544	12.917	12.028	11.464	11.073	10.786	10.566	10.391	10.250	10.034	9.814	9.589	9.474	9.358	9.241	9.122	9.001
7	16.236	12.404	10.882	10.050	9.522	9.155	8.885	8.678	8.514	8.380	8.176	7.968	7.754	7.645	7.534	7.422	7.309	7.193
8	14.688	11.042	9.596	8.805	8.302	7.952	7.694	7.496	7.339	7.211	7.015	6.814	6.608	6.503	6.396	6.288	6.177	6.065
9	13.614	10.107	8.717	7.956	7.471	7.134	6.885	6.693	6.541	6.417	6.227	6.032	5.832	5.729	5.625	5.519	5.410	5.300
10	12.826	9.427	8.081	7.343	6.872	6.545	6.302	6.116	5.968	5.847	5.661	5.471	5.274	5.173	5.071	4.966	4.859	4.750
11	12.226	8.912	7.600	6.881	6.422	6.102	5.865	5.682	5.537	5.418	5.236	5.049	4.855	4.756	4.654	4.551	4.445	4.337
12	11.754	8.510	7.226	6.521	6.071	5.757	5.525	5.345	5.202	5.085	4.906	4.721	4.530	4.431	4.331	4.228	4.123	4.015
13	11.374	8.186	6.926	6.233	5.791	5.482	5.253	5.076	4.935	4.820	4.643	4.460	4.270	4.173	4.073	3.970	3.866	3.758
14	11.060	7.922	6.680	5.998	5.562	5.257	5.031	4.857	4.717	4.603	4.428	4.247	4.059	3.961	3.862	3.760	3.655	3.547
15	10.798	7.701	6.476	5.803	5.372	5.071	4.847	4.674	4.536	4.424	4.250	4.070	3.883	3.786	3.687	3.585	3.480	3.372
16	10.575	7.514	6.303	5.638	5.212	4.913	4.692	4.521	4.384	4.272	4.099	3.920	3.734	3.638	3.539	3.437	3.332	3.224
17	10.384	7.354	6.156	5.497	5.075	4.779	4.559	4.389	4.254	4.142	3.971	3.793	3.607	3.511	3.412	3.311	3.206	3.097
18	10.218	7.215	6.028	5.375	4.956	4.663	4.445	4.276	4.141	4.030	3.860	3.683	3.498	3.402	3.303	3.201	3.096	2.987
19	10.073	7.093	5.916	5.268	4.853	4.561	4.345	4.177	4.043	3.933	3.763	3.587	3.402	3.306	3.208	3.106	3.000	2.891
20	9.944	6.986	5.818	5.174	4.762	4.472	4.257	4.090	3.956	3.847	3.678	3.502	3.318	3.222	3.123	3.022	2.916	2.806
21	9.830	6.891	5.730	5.091	4.681	4.393	4.179	4.013	3.880	3.771	3.602	3.427	3.243	3.147	3.049	2.947	2.841	2.730
22	9.727	6.806	5.652	5.017	4.609	4.322	4.109	3.944	3.812	3.703	3.535	3.360	3.176	3.081	2.982	2.880	2.774	2.663
23	9.635	6.730	5.582	4.950	4.544	4.259	4.047	3.882	3.750	3.642	3.475	3.300	3.116	3.021	2.922	2.820	2.713	2.602
24	9.551	6.661	5.519	4.890	4.486	4.202	3.991	3.826	3.695	3.587	3.420	3.246	3.062	2.967	2.868	2.765	2.658	2.546
25	9.475	6.598	5.462	4.835	4.433	4.150	3.939	3.776	3.645	3.537	3.370	3.196	3.013	2.918	2.819	2.716	2.609	2.496
26	9.406	6.541	5.409	4.785	4.384	4.103	3.893	3.730	3.599	3.492	3.325	3.151	2.968	2.873	2.774	2.671	2.563	2.450
27	9.342	6.489	5.361	4.740	4.340	4.059	3.850	3.687	3.557	3.450	3.284	3.110	2.928	2.832	2.733	2.630	2.522	2.408
28	9.284	6.440	5.317	4.698	4.300	4.020	3.811	3.649	3.519	3.412	3.246	3.073	2.890	2.794	2.695	2.592	2.483	2.369
29	9.230	6.396	5.276	4.659	4.262	3.983	3.775	3.613	3.483	3.377	3.211	3.038	2.855	2.759	2.660	2.557	2.448	2.333
30	9.180	6.355	5.239	4.623	4.228	3.949	3.742	3.580	3.450	3.344	3.179	3.006	2.823	2.727	2.628	2.524	2.415	2.300
40	8.828	6.066	4.976	4.374	3.986	3.713	3.509	3.350	3.222	3.117	2.953	2.781	2.598	2.502	2.401	2.296	2.184	2.064
60	8.495	5.795	4.729	4.140	3.760	3.492	3.291	3.134	3.008	2.904	2.742	2.570	2.387	2.290	2.187	2.079	1.962	1.834
120	8.179	5.539	4.497	3.921	3.548	3.285	3.087	2.933	2.808	2.705	2.544	2.373	2.188	2.089	1.984	1.871	1.747	1.606

Columns = numerator df · Rows = denominator df