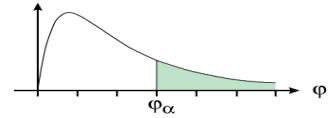


TABLE: F-Distribution Critical Values



$\alpha= 0.05$												
v_1												
v_2	1	2	3	4	5	6	7	8	9	10	15	20
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88	245.95	248.01
2	18.513	19.000	19.164	19.247	19.296	19.330	19.353	19.371	19.385	19.396	19.429	19.446
3	10.128	9.5521	9.2766	9.1172	9.0135	8.9406	8.8867	8.8452	8.8123	8.7855	8.7029	8.6602
4	7.7086	6.9443	6.5914	6.3882	6.2561	6.1631	6.0942	6.0410	5.9988	5.9644	5.8578	5.8025
5	6.6079	5.7861	5.4095	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351	4.6188	4.5581
6	5.9874	5.1433	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.0990	4.0600	3.9381	3.8742
7	5.5914	4.7374	4.3468	4.1203	3.9715	3.8660	3.7870	3.7257	3.6767	3.6365	3.5107	3.4445
8	5.3177	4.4590	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472	3.2184	3.1503
9	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373	3.0061	2.9365
10	4.9646	4.1028	3.7083	3.4780	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782	2.8450	2.7740
15	4.5431	3.6823	3.2874	3.0556	2.9013	2.5437	2.4034	2.2878	2.2468	2.2043	2.1601	2.0658
20	4.3512	3.4928	3.0984	2.8661	2.7109	2.3479	2.2033	2.0825	2.0391	1.9938	1.9464	1.8432
24	4.2597	3.4028	3.0088	2.7763	2.6207	2.2547	2.1077	1.9838	1.9390	1.8920	1.8424	1.7330
25	4.2417	3.3852	2.9912	2.7587	2.6030	2.2365	2.0889	1.9643	1.9192	1.8718	1.8217	1.7110
30	4.1709	3.3158	2.9223	2.6896	2.5336	2.1646	2.0148	1.8874	1.8409	1.7918	1.7396	1.6223
35	4.1213	3.2674	2.8742	2.6415	2.4851	2.1143	1.9629	1.8332	1.7856	1.7351	1.6811	1.5580
40	4.0847	3.2317	2.8387	2.6060	2.4495	2.0772	1.9245	1.7929	1.7444	1.6928	1.6373	1.5089
48	4.0847	3.2317	2.8387	2.6060	2.4495	2.0772	1.9245	1.7929	1.7444	1.6928	1.6373	1.5089
60	4.0847	3.2317	2.8387	2.6060	2.4495	2.0772	1.9245	1.7929	1.7444	1.6928	1.6373	1.5089
63	4.0384	3.1866	2.7939	2.5611	2.4044	2.0303	1.8757	1.7416	1.6918	1.6385	1.5807	1.4441
80	3.9934	3.1428	2.7505	2.5177	2.3607	1.9847	1.8282	1.6913	1.6401	1.5849	1.5244	1.3773
99	4.0012	3.1504	2.7581	2.5252	2.3683	1.9926	1.8364	1.7001	1.6491	1.5943	1.5343	1.3893
120	3.9934	3.1428	2.7505	2.5177	2.3607	1.9847	1.8282	1.6913	1.6401	1.5849	1.5244	1.3773
∞	3.9201	3.0718	2.6802	2.4472	2.2899	1.9105	1.7505	1.6084	1.5543	1.4952	1.4290	1.2539

$\alpha= 0.05$												
v_1												
v_2	24	25	30	35	40	48	60	63	80	99	120	∞
1	249.05	249.26	250.10	250.69	251.14	251.67	252.20	252.30	252.72	253.03	253.25	254.31
2	19.454	19.456	19.462	19.467	19.471	19.475	19.479	19.480	19.483	19.486	19.487	19.496
3	8.639	8.6341	8.6166	8.6039	8.5944	8.5832	8.5720	8.5699	8.5607	8.5542	8.5494	8.5264
4	5.7744	5.7687	5.7459	5.7294	5.7170	5.7024	5.6877	5.6849	5.6730	5.6644	5.6581	5.6281
5	4.5272	4.5209	4.4957	4.4775	4.4638	4.4476	4.4314	4.4283	4.4150	4.4055	4.3985	4.3650
6	3.8415	3.8348	3.8082	3.7889	3.7743	3.7571	3.7398	3.7365	3.7223	3.7122	3.7047	3.6689
7	3.4105	3.4036	3.3758	3.3557	3.3404	3.3225	3.3043	3.3008	3.2860	3.2753	3.2674	3.2298
8	3.1152	3.1081	3.0794	3.0586	3.0428	3.0241	3.0053	3.0017	2.9862	2.9751	2.9669	2.9276
9	2.9005	2.8932	2.8637	2.8422	2.8259	2.8067	2.7872	2.7835	2.7675	2.7560	2.7475	2.7067
10	2.7372	2.7298	2.6996	2.6776	2.6609	2.6411	2.6211	2.6172	2.6008	2.5889	2.5801	2.5379
15	2.2878	2.2797	2.2468	2.2227	2.2043	2.1824	2.1601	2.1558	2.1373	2.1240	2.1141	2.0658
20	2.0825	2.0739	2.0391	2.0135	1.9938	1.9704	1.9464	1.9417	1.9217	1.9072	1.8963	1.8432
24	1.9838	1.9750	1.9390	1.9124	1.8920	1.8675	1.8424	1.8375	1.8164	1.8011	1.7896	1.7330
25	1.9643	1.9554	1.9192	1.8924	1.8718	1.8471	1.8217	1.8168	1.7955	1.7800	1.7684	1.7110
30	1.8874	1.8782	1.8409	1.8132	1.7918	1.7661	1.7396	1.7344	1.7121	1.6957	1.6835	1.6223
35	1.8332	1.8239	1.7856	1.7571	1.7351	1.7086	1.6811	1.6757	1.6525	1.6354	1.6226	1.5580
40	1.7929	1.7835	1.7444	1.7154	1.6928	1.6656	1.6373	1.6317	1.6077	1.5900	1.5766	1.5089
48	1.7464	1.7367	1.6967	1.6668	1.6435	1.6154	1.5859	1.5802	1.5551	1.5365	1.5224	1.4502
60	1.7001	1.6902	1.6491	1.6183	1.5943	1.5650	1.5343	1.5283	1.5019	1.4822	1.4673	1.3893
63	1.6913	1.6814	1.6401	1.6091	1.5849	1.5554	1.5244	1.5183	1.4916	1.4718	1.4566	1.3773
80	1.6542	1.6440	1.6017	1.5699	1.5449	1.5144	1.4821	1.4757	1.4477	1.4268	1.4107	1.3247
99	1.6278	1.6175	1.5745	1.5419	1.5163	1.4850	1.4517	1.4451	1.4160	1.3941	1.3772	1.2849
120	1.6084	1.5980	1.5543	1.5213	1.4952	1.4632	1.4290	1.4222	1.3922	1.3695	1.3519	1.2539
∞	1.5173	1.5061	1.4591	1.4229	1.3940	1.3577	1.3180	1.3100	1.2735	1.2447	1.2214	1.0000