Figure 13.13. SIX PERCENTILES FOR THE F DISTRIBUTION [F_{ν_1,ν_2}]

[Calculated with *qf* in **R** Version 3.3.2 using 17-digit arithmetic; the accuracy of all digits in the table entries has *not* been verified]

Each table entry is the value (y) of the random variable $Y \sim F_{\nu_1,\nu_2}$ such that $\Pr(Y \le y) = p^*$ ($p^* = 0.9, ..., .9999$) (ν_1 is the numerator, ν_2 the denominator, degrees of freedom)

$Df \rightarrow \nu_1$ / ν_2 p^*

ν_2	p^*	1	2	3	4	5	6	7	8	9	10	12	15	20	25	30	40	50	60	75	100	175	350	1,000	ν_2
700	.9	2.7127	2.3102	2.0916	1.9529	1.8555	1.7825	1.7253	1.6790	1.6405	1.6079	1.5552	1.4970	1.4312	1.3864	1.3536	1.3078	1.2769	1.2543	1.2296	1.2020	1.1598	1.1241	1.0940	700
	.95	3.8548	3.0086	2.6176	2.3847	2.2269	2.1115	2.0226	1.9516	1.8932	1.8442	1.7660	1.6807	1.5856	1.5219	1.4755	1.4116	1.3688	1.3377	1.3039	1.2664	1.2096	1.1621	1.1223	
	.975	5.0456	3.7084	3.1348	2.8041	2.5846	2.4263	2.3056	2.2099	2.1319	2.0666	1.9633	1.8516	1.7282	1.6464	1.5872	1.5061	1.4522	1.4132	1.3710	1.3243	1.2542	1.1959	1.1474	
	.99	6.6712	4.6356	3.8097	3.3460	3.0434	2.8277	2.6649	2.5367	2.4327	2.3463	2.2102	2.0642	1.9047	1.7996	1.7242	1.6215	1.5536	1.5048	1.4521	1.3942	1.3077	1.2364	1.1774	
	.999	10.9196	6.9764	5.4816	4.6714	4.1547	3.7927	3.5229	3.3129	3.1440	3.0048	2.7877	2.5578	2.3102	2.1496	2.0354	1.8816	1.7812	1.7095	1.6327	1.5489	1.4253	1.3248	1.2427	
	.9999	15.3126	9.3326	7.1378	5.9694	5.2334	4.7226	4.3448	4.0526	3.8189	3.6272	3.3298	3.0175	2.6843	2.4701	2.3188	2.1166	1.9856	1.8925	1.7934	1.6859	1.5286	1.4019	1.2994	
800	.9	2.7118	2.3092	2.0906	1.9519	1.8545	1.7815	1.7243	1.6779	1.6394	1.6067	1.5540	1.4958	1.4298	1.3850	1.3521	1.3062	1.2752	1.2525	1.2277	1.1999	1.1573	1.1211	1.0901	800
	.95	3.8531	3.0070	2.6160	2.3831	2.2253	2.1099	2.0210	1.9500	1.8916	1.8425	1.7643	1.6789	1.5837	1.5199	1.4735	1.4094	1.3665	1.3353	1.3013	1.2635	1.2063	1.1580	1.1172	
	.975	5.0429	3.7059	3.1324	2.8018	2.5823	2.4240	2.3033	2.2077	2.1296	2.0643	1.9610	1.8492	1.7258	1.6438	1.5845	1.5033	1.4492	1.4101	1.3677	1.3208	1.2501	1.1909	1.1412	
	.99	6.6667	4.6318	3.8062	3.3427	3.0401	2.8245	2.6617	2.5335	2.4295	2.3431	2.2070	2.0610	1.9013	1.7962	1.7207	1.6178	1.5498	1.5008	1.4480	1.3897	1.3026	1.2302	1.1698	
	.999	10.9080	6.9677	5.4741	4.6645	4.1482	3.7864	3.5168	3.3069	3.1381	2.9990	2.7820	2.5522	2.3047	2.1440	2.0297	1.8758	1.7752	1.7033	1.6263	1.5422	1.4177	1.3159	1.2318	
	.9999	15.2904	9.3172	7.1250	5.9579	5.2228	4.7126	4.3352	4.0433	3.8098	3.6182	3.3211	3.0091	2.6761	2.4619	2.3107	2.1084	1.9772	1.8840	1.7847	1.6768	1.5186	1.3904	1.2856	
900	.9	2.7111	2.3085	2.0899	1.9511	1.8537	1.7807	1.7234	1.6770	1.6385	1.6058	1.5531	1.4948	1.4288	1.3839	1.3510	1.3050	1.2739	1.2512	1.2262	1.1982	1.1554	1.1187	1.0870	900
	.95	3.8518	3.0057	2.6148	2.3818	2.2240	2.1086	2.0197	1.9487	1.8903	1.8412	1.7629	1.6775	1.5822	1.5184	1.4719	1.4077	1.3647	1.3334	1.2993	1.2613	1.2037	1.1548	1.1131	
	.975	5.0407	3.7040	3.1306	2.8000	2.5806	2.4223	2.3016	2.2059	2.1278	2.0626	1.9592	1.8473	1.7238	1.6418	1.5825	1.5011	1.4469	1.4077	1.3651	1.3180	1.2468	1.1870	1.1362	
	.99	6.6631	4.6288	3.8034	3.3400	3.0376	2.8220	2.6592	2.5310	2.4270	2.3406	2.2045	2.0585	1.8988	1.7936	1.7180	1.6150	1.5468	1.4978	1.4447	1.3863	1.2985	1.2254	1.1636	
	.999	10.8990	6.9610	5.4683	4.6592	4.1432	3.7816	3.5121	3.3023	3.1336	2.9945	2.7776	2.5478	2.3003	2.1396	2.0253	1.8712	1.7705	1.6985	1.6213	1.5369	1.4118	1.3089	1.2232	
	.9999	15.2733	9.3052	7.1150	5.9490	5.2145	4.7047	4.3277	4.0360	3.8027	3.6113	3.3144	3.0026	2.6697	2.4556	2.3044	2.1021	1.9708	1.8775	1.7779	1.6698	1.5108	1.3814	1.2746	
1,000	.9	2.7106	2.3079	2.0893	1.9505	1.8530	1.7800	1.7228	1.6764	1.6378	1.6051	1.5524	1.4941	1.4280	1.3831	1.3501	1.3040	1.2729	1.2500	1.2250	1.1969	1.1538	1.1167	1.0845	1,000
	.95	3.8508	3.0047	2.6138	2.3808	2.2231	2.1076	2.0187	1.9476	1.8892	1.8402	1.7618	1.6764	1.5811	1.5171	1.4706	1.4063	1.3632	1.3318	1.2976	1.2596	1.2016	1.1522	1.1097	
	.975	5.0391	3.7025	3.1292	2.7986	2.5792	2.4208	2.3002	2.2045	2.1264	2.0611	1.9577	1.8459	1.7223	1.6402	1.5808	1.4993	1.4451	1.4058	1.3631	1.3158	1.2442	1.1838	1.1320	
	.99	6.6603	4.6264	3.8012	3.3380	3.0355	2.8200	2.6572	2.5290	2.4250	2.3386	2.2025	2.0565	1.8967	1.7915	1.7158	1.6127	1.5445	1.4953	1.4421	1.3835	1.2953	1.2215	1.1586	
	.999	10.8919	6.9557	5.4637	4.6549	4.1391	3.7777	3.5083	3.2986	3.1300	2.9909	2.7740	2.5443	2.2968	2.1361	2.0218	1.8676	1.7668	1.6947	1.6173	1.5327	1.4070	1.3033	1.2161	
	.9999	15.2595	9.2957	7.1070	5.9418	5.2079	4.6985	4.3217	4.0302	3.7971	3.6058	3.3091	2.9973	2.6647	2.4506	2.2994	2.0970	1.9656	1.8722	1.7725	1.6641	1.5045	1.3741	1.2656	
2,000	.9	2.7081	2.3052	2.0865	1.9477	1.8502	1.7771	1.7197	1.6733	1.6347	1.6019	1.5491	1.4906	1.4243	1.3792	1.3460	1.2996	1.2681	1.2450	1.2196	1.1910	1.1466	1.1077	1.0721	2,000
	.95	3.8461	3.0002	2.6094	2.3764	2.2186	2.1031	2.0142	1.9430	1.8846	1.8354	1.7570	1.6714	1.5758	1.5116	1.4648	1.4001	1.3567	1.3250	1.2903	1.2516	1.1920	1.1402	1.0935	
	.975	5.0315	3.6957	3.1226	2.7922	2.5728	2.4145	2.2938	2.1981	2.1200	2.0547	1.9512	1.8392	1.7154	1.6330	1.5734	1.4915	1.4368	1.3971	1.3538	1.3058	1.2323	1.1691	1.1123	
F_{ν_1,ν_2}	.99	6.6476	4.6158	3.7914	3.3285	3.0264	2.8110	2.6482	2.5201	2.4162	2.3298	2.1936	2.0475	1.8875	1.7820	1.7061	1.6025	1.5338	1.4842	1.4304	1.3708	1.2805	1.2033	1.1346	F_{ν_1,ν_2}
	.999	10.8596	6.9317	5.4428	4.6358	4.1210	3.7603	3.4914	3.2820	3.1137	2.9748	2.7582	2.5287	2.2812	2.1204	2.0059	1.8513	1.7500	1.6774	1.5993	1.5137	1.3853	1.2772	1.1823	
	.9999	15.1979	9.2529	7.0713	5.9099	5.1783	4.6705	4.2949	4.0042	3.7718	3.5810	3.2850	2.9740	2.6419	2.4280	2.2768	2.0742	1.9424	1.8486	1.7482	1.6387	1.4760	1.3406	1.2230	
3,000	.9	2.7072	2.3044	2.0856	1.9467	1.8492	1.7761	1.7187	1.6722	1.6336	1.6008	1.5480	1.4894	1.4231	1.3779	1.3446	1.2981	1.2665	1.2433	1.2178	1.1890	1.1442	1.1045	1.0676	3,000
	.95	3.8446	2.9987	2.6079	2.3749	2.2171	2.1016	2.0126	1.9415	1.8830	1.8339	1.7554	1.6697	1.5740	1.5098	1.4629	1.3981	1.3545	1.3227	1.2878	1.2489	1.1887	1.1361	1.0875	
	.975	5.0289	3.6934	3.1205	2.7901	2.5707	2.4124	2.2917	2.1960	2.1179	2.0526	1.9490	1.8370	1.7131	1.6306	1.5709	1.4888	1.4340	1.3941	1.3507	1.3024	1.2283	1.1640	1.1051	
	.99	6.6433	4.6122	3.7881	3.3254	3.0233	2.8080	2.6453	2.5172	2.4132	2.3268	2.1907	2.0445	1.8844	1.7789	1.7029	1.5991	1.5302	1.4804	1.4265	1.3666	1.2755	1.1971	1.1259	
	.999	10.8489	6.9237	5.4359	4.6294	4.1150	3.7545	3.4858	3.2765	3.1083	2.9695	2.7529	2.5235	2.2761	2.1152	2.0006	1.8459	1.7444	1.6716	1.5933	1.5073	1.3779	1.2683	1.1702	
	.9999	15.1775	9.2387	7.0595	5.8993	5.1685	4.6612	4.2860	3.9956	3.7634	3.5728	3.2771	2.9663	2.6343	2.4205	2.2693	2.0667	1.9347	1.8407	1.7401	1.6302	1.4665	1.3292	1.2077	
4,000	.9	2.7068	2.3039	2.0852	1.9463	1.8487	1.7756	1.7182	1.6717	1.6331	1.6003	1.5474	1.4889	1.4224	1.3772	1.3439	1.2974	1.2657	1.2425	1.2169	1.1880	1.1429	1.1029	1.0652	4,000
	.95	3.8438	2.9980	2.6071	2.3742	2.2163	2.1009	2.0119	1.9407	1.8822	1.8331	1.7546	1.6689	1.5732	1.5089	1.4620	1.3971	1.3534	1.3215	1.2866	1.2475	1.1871	1.1340	1.0845	
	.975	5.0277	3.6923	3.1194	2.7890	2.5697	2.4114	2.2907	2.1950	2.1168	2.0515	1.9480	1.8359	1.7119	1.6294	1.5697	1.4875	1.4326	1.3927	1.3492	1.3007	1.2263	1.1614	1.1014	
	.99	6.6412	4.6105	3.7865	3.3239	3.0218	2.8065	2.6438	2.5157	2.4117	2.3253	2.1892	2.0430	1.8829	1.7773	1.7013	1.5974	1.5284	1.4786	1.4245	1.3645	1.2730	1.1939	1.1213	
	.999	10.8436	6.9197	5.4324	4.6262	4.1120	3.7516	3.4830	3.2738	3.1056	2.9668	2.7503	2.5209	2.2735	2.1126	1.9980	1.8432	1.7416	1.6688	1.5903	1.5041	1.3743	1.2638	1.1639	
	.9999	15.1673	9.2316	7.0536	5.8940	5.1636	4.6566	4.2815	3.9913	3.7592	3.5687	3.2731	2.9624	2.6306	2.4168	2.2656	2.0629	1.9309	1.8368	1.7360	1.6259	1.4617	1.3234	1.1998	
5,000	.9	2.7065	2.3036	2.0849	1.9460	1.8484	1.7753	1.7179	1.6714	1.6328	1.6000	1.5471	1.4885	1.4221	1.3768	1.3435	1.2969	1.2653	1.2420	1.2163	1.1874	1.1422	1.1019	1.0638	5,000
	.95	3.8433	2.9975	2.6067	2.3737	2.2159	2.1004	2.0114	1.9403	1.8818	1.8326	1.7541	1.6684	1.5726	1.5083	1.4614	1.3964	1.3527	1.3208	1.2859	1.2467	1.1861	1.1327	1.0826	
	.975	5.0269	3.6916	3.1187	2.7884	2.5690	2.4107	2.2901	2.1943	2.1162	2.0509	1.9473	1.8352	1.7112	1.6287	1.5689	1.4867	1.4317	1.3918	1.3483	1.2997	1.2251	1.1598	1.0991	
	.99	6.6400	4.6094	3.7855	3.3229	3.0209	2.8056	2.6429	2.5148	2.4109	2.3245	2.1883	2.0421	1.8820	1.7763	1.7003	1.5964	1.5274	1.4775	1.4233	1.3632	1.2715	1.1920	1.1186	
	.999	10.8404	6.9173	5.4304	4.6243	4.1102	3.7499	3.4813	3.2721	3.1039	2.9652	2.7487	2.5194	2.2719	2.1110	1.9964	1.8415	1.7399	1.6670	1.5885	1.5022	1.3720	1.2610	1.1600	
	.9999	15.1612	9.2273	7.0500	5.8908	5.1607	4.6538	4.2788	3.9887	3.7567	3.5662	3.2707	2.9601	2.6283	2.4146	2.2634	2.0606	1.9286	1.8345	1.7336	1.6234	1.4588	1.3200	1.1950	
7,500	.9	2.7062	2.3033	2.0845	1.9456	1.8480	1.7749	1.7175	1.6710	1.6324	1.5996	1.5467	1.4881	1.4216	1.3763	1.3430	1.2963	1.2646	1.2413	1.2156	1.1866	1.1412	1.1007	1.0618	7,500
	.95	3.8427	2.9969	2.6061	2.3731	2.2153	2.0998	2.0108	1.9396	1.8811	1.8320	1.7535	1.6677	1.5719	1.5076	1.4606	1.3956	1.3519	1.3199	1.2849	1.2456	1.1848	1.1310	1.0800	
	.975	5.0259	3.6907	3.1179	2.7875	2.5682	2.4099	2.2892	2.1935	2.1153	2.0500	1.9465	1.8343	1.7103	1.6278	1.5680	1.4857	1.4306	1.3906	1.3470	1.2983	1.2234	1.1577	1.0960	
	.99	6.6383	4.6080	3.7842	3.3217	3.0197	2.8044	2.6417	2.5136	2.4097	2.3233	2.1871	2.0409	1.8808	1.7751	1.6990	1.5950	1.5259	1.4760	1.4217	1.3615	1.2694	1.1894	1.1148	
	.999	10.8361	6.9141	5.4276	4.6218	4.1078	3.7476	3.4790	3.2699	3.1018	2.9631	2.7466	2.5173	2.2699	2.1089	1.9943	1.8394	1.7377	1.6647	1.5861	1.4996	1.3691	1.2574	1.1548	
	.9999	15.1530	9.2217	7.0453	5.8866	5.1568	4.6501	4.2753	3.9853	3.7533	3.5629	3.2675	2.9570	2.6253	2.4116	2.2604	2.0576	1.9255	1.8313	1.7304	1.6200	1.4550	1.3153	1.1885	
10,000	.9	2.7060	2.3031	2.0843	1.9454	1.8478	1.7747	1.7173	1.6708	1.6321	1.5994	1.5464	1.4878	1.4213	1.3760	1.3427	1.2960	1.2643	1.2410	1.2152	1.1862	1.1407	1.1000	1.0608	10,000
	.95	3.8424	2.9966	2.6058	2.3728	2.2150	2.0995	2.0105	1.9393	1.8808	1.8316	1.7531	1.6674	1.5716	1.5072	1.4602	1.3952	1.3514	1.3194	1.2844	1.2451	1.1841	1.1301	1.0787	
	.975	5.0254	3.6902	3.1174	2.7871	2.5678	2.4095	2.2888	2.1931	2.1149	2.0496	1.9460	1.8339	1.7099	1.6273	1.5675	1.4851	1.4301	1.3900	1.3464	1.2977	1.2226	1.1567	1.0944	
	.99	6.6374	4.6073	3.7836	3.3210	3.0191	2.8038	2.6411	2.5130	2.4091	2.3227	2.1865	2.0403	1.8801	1.7745	1.6983	1.5943	1.5252	1.4752	1.4209	1.3606	1.2684	1.1881	1.1129	
	.999	10.8340	6.9125	5.4262	4.6205	4.1066	3.7464	3.4779	3.2688	3.1007	2.9620	2.7456	2.5163	2.2688	2.1079	1.9933	1.8383	1.7366	1.6636	1.5849	1.4983	1.3676	1.2555	1.1521	
	.9999	15.1489	9.2188	7.0429	5.8845	5.1548	4.6483	4.2735	3.9836	3.7517	3.5613	3.2660	2.9555	2.6238	2.4101	2.2589	2.0561	1.9240	1.8298	1.7288	1.6183	1.4530	1.3129	1.1851	
		1	2	3	4	5	6	7	8	9	10	12	15	20	25	30	40	50	60	75	100	175	350	1,000	

2017-02-20

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