

Figure 13.13p. 99.9999th PERCENTILES FOR THE F DISTRIBUTION $[F_{v_1, v_2}]$

[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 $Y \sim F_{v_1, v_2}$ such that $\Pr(Y \leq y) = 0.999999$ (v_1 is the numerator, v_2 the denominator, degrees of freedom)

v_2/v_1	1	2	3	4	5	6	7	8	9	10	12	15	20	25	30	40	50	60	75	100	175	350	1,000	
1	405.284734545	999.999999971	540.379646061	562.499999967	576.404955798	585.937499966	592.873668821	598.144531215	602.284361977	605.621337855	610.668182338	615.764017527	620.908022648	624.017177963	626.099302860	628.712372532	630.285719746	631.336894630	632.389881125	633.444670751	634.803464541	635.710966051	636.301542062	1
2	999.998.5	999.999.0	999.999.2	999.999.2	999.999.3	999.999.3	999.999.4	999.999.4	999.999.4	999.999.4	999.999.4	999.999.4	999.999.4	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	999.999.5	
3	16940.2	14998.5	142297	138141	135531	13373.9	13243.2	131437	13065.3	13002.0	12906.0	12808.7	12710.2	12650.4	12610.3	12559.9	12529.4	12509.1	12488.6	12468.2	12441.8	12424.4	12412.6	
4	2446.16	1998.00	1824.19	1730.72	1672.12	1631.88	1602.52	1580.14	1562.51	1548.26	1526.64	1504.70	1482.44	1468.92	1459.84	1448.40	1441.50	1436.88	1432.24	1427.59	1421.59	1417.57	1414.96	
5	811.02	625.47	554.59	516.64	492.88	476.57	464.67	455.59	448.43	442.65	433.86	424.94	415.87	410.36	406.65	401.98	399.16	397.27	395.37	393.47	391.01	389.36	388.29	5
6	401.92	297.00	257.37	236.23	223.01	213.94	207.32	202.27	198.28	195.06	190.17	185.19	180.13	177.05	174.97	172.36	170.77	169.71	168.65	167.58	166.20	165.27	164.67	
7	248.599	1777.82	151.266	137160	128.349	122.302	117.888	114.521	111.864	1097.15	106.447	103.123	997.37	976.74	96.284	94.530	93.468	92.756	92.041	91.322	90.393	897.71	893.64	
8	1757.52	122.491	102.683	92.170	85.608	81.106	77.819	75.311	73.332	717.30	69.293	66.813	64.284	62.741	61.701	60.387	59.591	59.057	58.520	57.981	57.283	56.814	56.509	
9	135.415	92.450	76.556	68.135	62.883	59.281	56.650	54.642	53.058	517.74	49.822	47.832	45.802	44.562	43.726	42.669	42.027	41.597	41.164	40.729	40.165	39.787	39.540	
10	110.597	74.245	60.855	537.72	49.357	46.328	44.116	42.428	41.095	40.016	38.372	36.696	34.985	33.938	33.232	32.338	31.796	31.431	31.065	30.696	30.218	29.898	29.688	10
11	94.118	62.307	50.631	44.462	40.618	37.982	36.057	34.586	33.425	32.485	31.052	29.591	28.097	27.183	26.565	25.783	25.308	24.988	24.667	24.344	23.924	23.642	23.458	
12	82.532	54.000	43.558	38.048	34.615	32.261	30.541	29.228	28.191	27.350	26.069	24.762	23.424	22.605	22.051	21.349	20.922	20.635	20.346	20.055	19.677	19.243	19.257	
13	74.017	47.949	38.432	33.414	30.289	28.146	26.581	25.385	24.440	23.674	22.507	21.315	20.094	19.346	18.839	18.197	17.806	17.543	17.278	17.011	16.665	16.432	16.279	
14	67.5362	43.3780	34.5771	29.9399	27.0527	25.0729	23.6264	22.5212	21.6480	20.9400	19.8605	18.7573	17.6264	16.9326	16.4627	15.8665	15.5034	15.2591	15.0127	14.7642	14.4415	14.2242	14.0820	
15	62.4611	39.8218	31.5891	27.2541	24.5556	22.7051	21.3531	20.3198	19.5033	18.8411	17.8311	16.7983	15.7389	15.0883	14.6475	14.0876	13.7464	13.5167	13.2849	13.0510	12.7471	12.5422	12.4081	15
16	58.3927	36.9873	29.2155	25.1254	22.5799	20.8343	19.5587	18.5837	17.8131	17.1880	16.2343	15.2586	14.2569	13.6413	13.2239	12.6934	12.3699	12.1519	11.9319	11.7097	11.4208	11.2260	11.0983	
17	55.0669	34.6819	27.2907	23.4028	20.9835	19.3244	18.1118	17.1849	16.4522	15.8577	14.9504	14.0218	13.0677	12.4809	12.0828	11.5763	11.2673	11.0589	10.8486	10.6360	10.3594	10.1727	10.0503	
18	52.3027	32.7743	25.7023	21.9839	19.6703	18.0837	16.9240	16.0374	15.3364	14.7675	13.8991	13.0098	12.0956	11.5328	11.1508	10.6645	10.3675	10.1672	9.9648	9.7602	9.4937	9.3137	9.1957	
19	49.9724	31.1727	24.3718	20.7974	18.5736	17.0485	15.9337	15.0813	14.4072	13.8601	13.0246	12.1688	11.2883	10.7459	10.3775	9.9082	9.6214	9.4278	9.2321	9.0342	8.7763	8.6019	8.4875	
20	47.9838	29.8107	23.2429	19.7921	17.6455	16.1732	15.0970	14.2739	13.6229	13.0945	12.2874	11.4601	10.6086	10.0837	9.7269	9.2721	8.9940	8.8061	8.6162	8.4240	8.1733	8.0037	7.8923	20
22	44.7746	27.6231	21.4347	18.1851	16.1639	14.7777	13.7641	12.9888	12.3754	11.8773	11.1162	10.3354	9.5309	9.0342	8.6963	8.2649	8.0008	7.8222	7.6414	7.4583	7.2191	7.0570	6.9505	
24	42.3028	25.9473	20.0541	16.9610	15.0373	13.7179	12.7531	12.0148	11.4306	10.9561	10.2307	9.4861	8.7179	8.2431	7.9197	7.5064	7.2530	7.0815	6.9077	6.7314	6.5009	6.3445	6.2415	
26	40.3441	24.6255	18.9681	16.0000	14.1543	12.8882	11.9622	11.2536	10.6927	10.2370	9.5401	8.8243	8.0850	7.6276	7.3157	6.9167	6.6716	6.5056	6.3373	6.1664	5.9425	5.7904	5.6901	
28	38.7558	23.5577	18.0931	15.2269	13.4448	12.2223	11.3281	10.6436	10.1017	9.6613	8.9877	8.2953	7.5796	7.1362	6.8336	6.4461	6.2079	6.0463	5.8823	5.7156	5.4970	5.3482	5.2500	
30	37.4431	22.6783	17.3738	14.5924	12.8632	11.6769	10.8090	10.1446	9.6185	9.1908	8.5365	7.8635	7.1673	6.7356	6.4407	6.0627	5.8299	5.6720	5.5115	5.3482	5.1338	4.9876	4.8910	30
35	34.9841	21.0385	16.0365	13.4153	11.7858	10.6677	9.8496	9.2231	8.7267	8.3231	7.7051	7.0687	6.4092	5.9993	5.7187	5.3582	5.1356	4.9842	4.8301	4.6729	4.4657	4.3240	4.2300	
40	33.2751	19.9052	15.1155	12.6065	11.0469	9.9768	9.1935	8.5935	8.1180	7.7312	7.1386	6.5278	5.8938	5.4990	5.2283	4.8797	4.6640	4.5170	4.3670	4.2137	4.0110	3.8717	3.7791	
45	32.0204	19.0766	14.4439	12.0179	10.5100	9.4752	8.7177	8.1372	7.6772	7.3028	6.7289	6.1370	5.5217	5.1380	4.8745	4.5345	4.3236	4.1796	4.0325	3.8818	3.6819	3.5440	3.4521	
50	31.0608	18.4450	13.9330	11.5708	10.1026	9.0950	8.3573	7.7919	7.3437	6.9789	6.4194	5.8419	5.2410	4.8657	4.6076	4.2741	4.0668	3.9250	3.7799	3.6310	3.4328	3.2956	3.2039	50
60	29.6910	17.5468	13.2081	10.9376	9.5264	8.5579	7.8485	7.3048	6.8735	6.5224	5.9835	5.4267	4.8462	4.4829	4.2325	3.9079	3.7055	3.5666	3.4241	3.2772	3.0807	2.9438	2.8517	
70	28.7612	16.9394	12.7191	10.5112	9.1389	8.1970	7.5071	6.9781	6.5584	6.2166	5.6918	5.1491	4.5824	4.2271	3.9818	3.6631	3.4638	3.3267	3.1856	3.0398	2.8437	2.7061	2.6130	
80	28.0891	16.5015	12.3673	10.2047	8.8607	7.9381	7.2623	6.7440	6.3327	5.9977	5.4831	4.9505	4.3939	4.0443	3.8027	3.4881	3.2909	3.1549	3.0147	2.8694	2.6730	2.5344	2.4401	
90	27.5808	16.1710	12.1021	9.9740	8.6514	7.7435	7.0784	6.5682	6.1632	5.8333	5.3265	4.8017	4.2526	3.9073	3.6684	3.3568	3.1611	3.0259	2.8863	2.7411	2.5441	2.4043	2.3086	
100	27.1830	15.9128	11.8951	9.7940	8.4883	7.5919	6.9351	6.4313	6.0314	5.7055	5.2047	4.6859	4.1428	3.8009	3.5640	3.2548	3.0601	2.9255	2.7862	2.6410	2.4432	2.3021	2.2050	100
125	26.4861	15.4615	11.5337	9.4.																				