

Figure 13.13a. 50th 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 $\Pr(Y \leq y) = 0.5$ (v_1 is the numerator, v_2 the denominator, degrees of freedom)

$\downarrow$ $v_2 \backslash v_1$		Each table entry is the value (y) of the random variable $Y \sim F_{v_1, v_2}$ such that $\Pr(Y \leq y) = 0.5$ (v_1 is the numerator, v_2 the denominator, degrees of freedom)																							
		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	1	1.0000	1.5000	1.7092	1.8227	1.8937	1.9422	1.9774	2.0041	2.0250	2.0419	2.0674	2.0931	2.1191	2.1347	2.1452	2.1584	2.1663	2.1716	2.1769	2.1822	2.1890	2.1935	2.1965	1
	2	.66667	1.0000	1.1349	1.2071	1.2519	1.2824	1.3046	1.3213	1.3344	1.3450	1.3610	1.3771	1.3933	1.4031	1.4096	1.4178	1.4228	1.4261	1.4294	1.4327	1.4370	1.4398	1.4417	
	3	.58506	.88110	1.0000	1.0632	1.1024	1.1289	1.1482	1.1627	1.1741	1.1833	1.1972	1.2111	1.2252	1.2337	1.2393	1.2465	1.2507	1.2536	1.2565	1.2593	1.2630	1.2655	1.2671	
	4	.54863	.82843	.94053	1.0000	1.0367	1.0617	1.0797	1.0933	1.1040	1.1126	1.1255	1.1386	1.1517	1.1596	1.1649	1.1716	1.1756	1.1782	1.1809	1.1836	1.1870	1.1893	1.1908	
	5	.52807	.79877	.90715	.96456	1.0000	1.0240	1.0414	1.0545	1.0648	1.0730	1.0855	1.0980	1.1106	1.1183	1.1234	1.1297	1.1336	1.1361	1.1387	1.1413	1.1446	1.1468	1.1483	5
	6	.51489	.77976	.88578	.94191	.97654	1.0000	1.0169	1.0298	1.0398	1.0478	1.0600	1.0722	1.0845	1.0919	1.0969	1.1031	1.1068	1.1093	1.1118	1.1143	1.1176	1.1197	1.1211	
	7	.50572	.76655	.87094	.92619	.96026	.98334	1.0000	1.0126	1.0224	1.0304	1.0423	1.0543	1.0664	1.0737	1.0785	1.0846	1.0883	1.0908	1.0932	1.0957	1.0989	1.1010	1.1023	
	8	.49898	.75683	.86004	.91465	.94831	.97111	.98757	1.0000	1.0097	1.0175	1.0293	1.0412	1.0531	1.0603	1.0651	1.0711	1.0747	1.0772	1.0796	1.0820	1.0851	1.0872	1.0886	
	9	.49382	.74938	.85168	.90580	.93916	.96175	.97805	.99037	1.0000	1.0077	1.0194	1.0311	1.0429	1.0500	1.0548	1.0608	1.0643	1.0667	1.0691	1.0715	1.0746	1.0767	1.0780	
	10	.48974	.74349	.84508	.89882	.93193	.95436	.97054	.98276	.99232	1.0000	1.0116	1.0232	1.0349	1.0420	1.0467	1.0526	1.0562	1.0585	1.0609	1.0633	1.0664	1.0684	1.0697	10
F _{v₁, v₂} .50	11	.48643	.73872	.83973	.89316	.92608	.94837	.96445	.97660	.98610	.99374	1.0052	1.0168	1.0284	1.0354	1.0401	1.0460	1.0495	1.0519	1.0542	1.0566	1.0597	1.0617	1.0630	
	12	.48370	.73477	.83531	.88848	.92124	.94342	.95943	.97152	.98097	.98856	1.0000	1.0115	1.0231	1.0300	1.0347	1.0405	1.0440	1.0464	1.0487	1.0511	1.0541	1.0561	1.0575	
	13	.48140	.73145	.83159	.88455	.91718	.93927	.95520	.96724	.97665	.98421	.99560	1.0071	1.0186	1.0255	1.0301	1.0360	1.0395	1.0418	1.0441	1.0465	1.0495	1.0515	1.0528	
	14	.47944	.72863	.82842	.88119	.91371	.93572	.95160	.96360	.97298	.98051	.99186	1.0033	1.0147	1.0216	1.0263	1.0321	1.0355	1.0379	1.0402	1.0425	1.0455	1.0475	1.0488	
	15	.47775	.72619	.82568	.87830	.91072	.93267	.94850	.96046	.96981	.97732	.98863	1.0000	1.0114	1.0183	1.0229	1.0287	1.0322	1.0345	1.0368	1.0391	1.0421	1.0441	1.0454	15
	16	.47628	.72406	.82330	.87579	.90812	.93001	.94580	.95772	.96705	.97454	.98582	.99716	1.0086	1.0154	1.0200	1.0258	1.0292	1.0315	1.0338	1.0362	1.0391	1.0411	1.0424	
	17	.47499	.72219	.82121	.87357	.90583	.92767	.94342	.95532	.96462	.97209	.98335	.99466	1.0060	1.0129	1.0175	1.0232	1.0266	1.0289	1.0313	1.0336	1.0365	1.0385	1.0398	
	18	.47384	.72054	.81935	.87161	.90381	.92560	.94132	.95319	.96247	.96993	.98116	.99244	1.0038	1.0106	1.0152	1.0209	1.0244	1.0267	1.0290	1.0313	1.0342	1.0362	1.0375	
	19	.47282	.71906	.81770	.86986	.90200	.92375	.93944	.95129	.96056	.96800	.97920	.99047	1.0018	1.0086	1.0132	1.0189	1.0223	1.0246	1.0269	1.0292	1.0322	1.0341	1.0354	
	20	.47191	.71773	.81621	.86829	.90038	.92209	.93776	.94959	.95884	.96626	.97745	.98870	1.0000	1.0068	1.0114	1.0171	1.0205	1.0228	1.0251	1.0274	1.0303	1.0323	1.0336	20
F _{v₁, v₂} .50	22	.47033	.71545	.81365	.86559	.89758	.91924	.93486	.94665	.95588	.96328	.97444	.98565	.99692	1.0037	1.0082	1.0139	1.0173	1.0196	1.0219	1.0242	1.0271	1.0291	1.0304	
	24	.46902	.71356	.81153	.86335	.89526	.91687	.93245	.94422	.95342	.96081	.97194	.98312	.99436	1.0011	1.0057	1.0113	1.0147	1.0170	1.0193	1.0216	1.0245	1.0265	1.0277	
	26	.46791	.71196	.80974	.86145	.89331	.91487	.93042	.94217	.95135	.95872	.96983	.98099	.99220	.99896	1.0035	1.0091	1.0125	1.0148	1.0171	1.0193	1.0223	1.0242	1.0255	
	28	.46697	.71059	.80821	.85984	.89164	.91316	.92869	.94041	.94958	.95694	.96802	.97917	.99036	.99710	1.0016	1.0073	1.0106	1.0129	1.0152	1.0175	1.0204	1.0223	1.0236	
	30	.46616	.70941	.80689	.85844	.89019	.91169	.92719	.93890	.94805	.95540	.96647	.97759	.98877	.99550	1.0000	1.0056	1.0090	1.0113	1.0135	1.0158	1.0187	1.0207	1.0220	30
	35	.46453	.70706	.80425	.85565	.88731	.90874	.92420	.93587	.94500	.95232	.96336	.97445	.98560	.99231	.99679	1.0024	1.0058	1.0080	1.0103	1.0126	1.0155	1.0174	1.0187	
	40	.46332	.70530	.80228	.85357	.88516	.90654	.92197	.93361	.94272	.95003	.96104	.97211	.98323	.98992	.99440	1.0000	1.0034	1.0056	1.0079	1.0101	1.0130	1.0150	1.0162	
	45	.46237	.70393	.80075	.85195	.88349	.90484	.92024	.93186	.94095	.94825	.95924	.97029	.98139	.98807	.99254	.99813	1.0015	1.0037	1.0060	1.0082	1.0111	1.0131	1.0143	
	50	.46162	.70285	.79953	.85066	.88216	.90348	.91885	.93047	.93954	.94683	.95781	.96884	.97992	.98660	.99106	.99664	1.0000	1.0022	1.0045	1.0067	1.0096	1.0115	1.0128	50
	60	.46050	.70122	.79770	.84873	.88017	.90144	.91679	.92837	.93743	.94471	.95566	.96667	.97773	.98439	.98884	.99441	.99776	1.0000	1.0022	1.0045	1.0074	1.0093	1.0105	
70	.45970	.70006	.79640	.84736	.87875	.89999	.91531	.92689	.93593	.94319	.95413	.96512	.97617	.98282	.98726	.99283	.99617	.99840	1.0006	1.0029	1.0058	1.0077	1.0089		
80	.45910	.69919	.79543	.84633	.87768	.89891	.91421	.92577	.93480	.94206	.95299	.96397	.97500	.98164	.98608	.99164	.99498	.99721	.99944	1.0017	1.0046	1.0065	1.0077		
90	.45863	.69851	.79467	.84553	.87686	.89806	.91336	.92490	.93393	.94118	.95210	.96307	.97409	.98073	.98516	.99072	.99405	.99628	.99851	1.0007	1.0036	1.0055	1.0068		
100	.45826	.69797	.79407	.84489	.87620	.89739	.91267	.92421	.93323	.94048	.95139	.96235	.97337	.98000	.98443	.98989	.99332	.99554	.99777	1.0000	1.0029	1.0048	1.0060	100	
125	.45759	.69701	.79298	.84374	.87501	.89618	.91144	.92297	.93198	.93921	.95011	.96106	.97206	.97869	.98311	.98866	.99199	.99421	.99644	.99866	1.0015	1.0034	1.0047		
150	.45715	.69636	.79226	.84298	.87422	.89537	.91062	.92214	.93114	.93837	.94926	.96020	.97119	.97781	.98224	.98777	.99110	.99332	.99555	.99777	1.0006	1.0025	1.0038		
175	.45683	.69590	.79174	.84243	.87366	.89480	.91004	.92155	.93055	.93777	.94865	.95959	.97058	.97719	.98161										

Figure 13.13b. 65th 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 $\Pr(Y \leq y) = 0.65$ (v_1 is the numerator, v_2 the denominator, degrees of freedom)

df v ₂	Each table entry is the value (y) of the random variable $Y \sim F_{v_1, v_2}$ such that $\Pr(Y \leq y) = 0.65$ (v ₁ is the numerator, v ₂ the denominator, degrees of freedom)																									
	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			
2017-02-20	1	2.6629	3.5816	3.9632	4.1703	4.2999	4.3885	4.4528	4.5017	4.5400	4.5709	4.6175	4.6646	4.7120	4.7407	4.7599	4.7839	4.7984	4.8081	4.8178	4.8275	4.8400	4.8484	4.8538	1	
	2	1.4632	1.8571	2.0040	2.0803	2.1271	2.1587	2.1814	2.1986	2.2120	2.2228	2.2390	2.2553	2.2717	2.2816	2.2882	2.2964	2.3014	2.3047	2.3080	2.3114	2.3156	2.3185	2.3204		
	3	1.2200	1.5203	1.6243	1.6761	1.7070	1.7275	1.7420	1.7529	1.7613	1.7680	1.7780	1.7880	1.7980	1.8039	1.8079	1.8128	1.8157	1.8177	1.8197	1.8216	1.8242	1.8258	1.8269		
	4	1.1179	1.3806	1.4671	1.5087	1.5328	1.5484	1.5594	1.5674	1.5736	1.5784	1.5856	1.5927	1.5996	1.6037	1.6063	1.6097	1.6116	1.6129	1.6142	1.6155	1.6172	1.6183	1.6190		
	5	1.0620	1.3046	1.3817	1.4176	1.4378	1.4507	1.4595	1.4659	1.4707	1.4744	1.4799	1.4852	1.4902	1.4931	1.4950	1.4973	1.4986	1.4995	1.5004	1.5012	1.5023	1.5030	1.5035	5	
	6	1.0269	1.2570	1.3280	1.3603	1.3781	1.3891	1.3965	1.4017	1.4057	1.4087	1.4129	1.4169	1.4206	1.4227	1.4240	1.4255	1.4264	1.4269	1.4275	1.4280	1.4287	1.4291	1.4294		
	7	1.0027	1.2243	1.2912	1.3210	1.3370	1.3467	1.3531	1.3575	1.3608	1.3632	1.3666	1.3696	1.3723	1.3737	1.3745	1.3755	1.3760	1.3763	1.3766	1.3768	1.3772	1.3773	1.3774		
	8	.98514	1.2005	1.2645	1.2923	1.3070	1.3157	1.3213	1.3252	1.3279	1.3299	1.3326	1.3349	1.3367	1.3376	1.3380	1.3385	1.3387	1.3388	1.3388	1.3389	1.3389	1.3389	1.3389	1.3389	
	9	.97176	1.1824	1.2441	1.2705	1.2842	1.2921	1.2971	1.3004	1.3027	1.3044	1.3065	1.3082	1.3093	1.3097	1.3099	1.3099	1.3098	1.3098	1.3096	1.3095	1.3093	1.3091	1.3089		
	10	.96123	1.1682	1.2281	1.2533	1.2662	1.2735	1.2780	1.2809	1.2829	1.2842	1.2859	1.2870	1.2876	1.2876	1.2875	1.2872	1.2869	1.2866	1.2863	1.2860	1.2855	1.2852	1.2849	10	
	11	.95274	1.1567	1.2151	1.2395	1.2517	1.2585	1.2626	1.2651	1.2668	1.2679	1.2692	1.2699	1.2699	1.2696	1.2692	1.2686	1.2681	1.2677	1.2672	1.2668	1.2661	1.2656	1.2653		
	12	.94575	1.1473	1.2045	1.2280	1.2397	1.2460	1.2498	1.2521	1.2535	1.2544	1.2553	1.2556	1.2552	1.2546	1.2540	1.2531	1.2524	1.2519	1.2513	1.2507	1.2498	1.2492	1.2487		
	13	.93988	1.1394	1.1956	1.2185	1.2296	1.2356	1.2391	1.2411	1.2423	1.2430	1.2436	1.2436	1.2428	1.2419	1.2412	1.2399	1.2391	1.2384	1.2377	1.2370	1.2359	1.2352	1.2347		
	14	.93490	1.1326	1.1880	1.2103	1.2211	1.2268	1.2299	1.2317	1.2328	1.2333	1.2337	1.2333	1.2322	1.2311	1.2301	1.2287	1.2276	1.2269	1.2261	1.2252	1.2240	1.2231	1.2225		
	15	.93061	1.1268	1.1815	1.2033	1.2137	1.2191	1.2220	1.2237	1.2245	1.2250	1.2251	1.2244	1.2230	1.2217	1.2205	1.2189	1.2177	1.2168	1.2159	1.2149	1.2136	1.2126	1.2119	15	
	16	.92688	1.1218	1.1758	1.1972	1.2073	1.2124	1.2152	1.2166	1.2174	1.2176	1.2175	1.2167	1.2149	1.2134	1.2121	1.2103	1.2090	1.2080	1.2070	1.2059	1.2044	1.2033	1.2026		
	17	.92361	1.1174	1.1708	1.1919	1.2017	1.2066	1.2092	1.2105	1.2110	1.2112	1.2109	1.2098	1.2078	1.2061	1.2047	1.2026	1.2012	1.2002	1.1991	1.1979	1.1962	1.1950	1.1942		
	18	.92072	1.1135	1.1664	1.1871	1.1967	1.2014	1.2038	1.2050	1.2054	1.2055	1.2050	1.2038	1.2015	1.1996	1.1981	1.1959	1.1943	1.1932	1.1920	1.1907	1.1889	1.1876	1.1867		
	19	.91814	1.1100	1.1625	1.1829	1.1922	1.1968	1.1990	1.2001	1.2004	1.2004	1.1998	1.1983	1.1959	1.1938	1.1922	1.1898	1.1881	1.1869	1.1856	1.1842	1.1823	1.1809	1.1800		
20	.91582	1.1069	1.1590	1.1791	1.1882	1.1926	1.1948	1.1957	1.1960	1.1958	1.1951	1.1934	1.1908	1.1886	1.1868	1.1842	1.1825	1.1812	1.1798	1.1784	1.1763	1.1749	1.1739	20		
22	.91185	1.1016	1.1529	1.1726	1.1814	1.1855	1.1874	1.1881	1.1882	1.1880	1.1869	1.1850	1.1819	1.1795	1.1775	1.1747	1.1727	1.1713	1.1698	1.1682	1.1659	1.1643	1.1631			
24	.90856	1.0971	1.1479	1.1672	1.1757	1.1796	1.1813	1.1818	1.1818	1.1814	1.1801	1.1779	1.1746	1.1719	1.1698	1.1667	1.1645	1.1630	1.1613	1.1595	1.1571	1.1553	1.1541			
26	.90578	1.0934	1.1437	1.1626	1.1709	1.1746	1.1761	1.1765	1.1764	1.1759	1.1744	1.1720	1.1683	1.1654	1.1631	1.1598	1.1575	1.1559	1.1541	1.1522	1.1495	1.1476	1.1462			
28	.90342	1.0902	1.1401	1.1588	1.1668	1.1703	1.1717	1.1720	1.1717	1.1711	1.1695	1.1669	1.1630	1.1599	1.1575	1.1539	1.1515	1.1497	1.1478	1.1458	1.1429	1.1408	1.1394			
30	.90137	1.0874	1.1369	1.1554	1.1632	1.1666	1.1679	1.1681	1.1677	1.1670	1.1652	1.1624	1.1583	1.1551	1.1525	1.1488	1.1462	1.1443	1.1423	1.1402	1.1371	1.1349	1.1334	30		
35	.89731	1.0820	1.1307	1.1487	1.1562	1.1593	1.1603	1.1602	1.1597	1.1588	1.1567	1.1536	1.1490	1.1454	1.1425	1.1384	1.1355	1.1334	1.1312	1.1288	1.1253	1.1228	1.1211			
40	.89427	1.0779	1.1261	1.1437	1.1509	1.1538	1.1546	1.1544	1.1537	1.1527	1.1504	1.1469	1.1419	1.1380	1.1350	1.1305	1.1274	1.1251	1.1227	1.1200	1.1162	1.1135	1.1116			
45	.89192	1.0747	1.1225	1.1399	1.1468	1.1495	1.1502	1.1498	1.1490	1.1479	1.1454	1.1417	1.1364	1.1323	1.1290	1.1243	1.1210	1.1186	1.1159	1.1131	1.1090	1.1060	1.1039			
50	.89005	1.0722	1.1197	1.1368	1.1436	1.1461	1.1466	1.1462	1.1453	1.1441	1.1414	1.1375	1.1320	1.1277	1.1243	1.1193	1.1158	1.1132	1.1104	1.1074	1.1030	1.0998	1.0975	50		
60	.88725	1.0684	1.1154	1.1322	1.1387	1.1410	1.1414	1.1408	1.1397	1.1383	1.1354	1.1313	1.1253	1.1207	1.1171	1.1117	1.1079	1.1051	1.1020	1.0987	1.0939	1.0902	1.0876			
70	.88526	1.0657	1.1124	1.1289	1.1352	1.1374	1.1376	1.1369	1.1357	1.1342	1.1312	1.1268	1.1206	1.1157	1.1118	1.1061	1.1021	1.0992	1.0959	1.0923	1.0871	1.0831	1.0802			
80	.88377	1.0637	1.1101	1.1265	1.1327	1.1347	1.1348	1.1340	1.1327	1.1312	1.1280	1.1234	1.1170	1.1119	1.1079	1.1020	1.0978	1.0946	1.0912	1.0874	1.0818	1.0775	1.0744			
90	.88262	1.0622	1.1084	1.1245	1.1306	1.1326	1.1326	1.1317	1.1304	1.1288	1.1255	1.1208	1.1142	1.1090	1.1048	1.0987	1.0943	1.0911	1.0875	1.0835	1.0776	1.0730	1.0697			
100	.88170	1.0609	1.1069	1.1230	1.1290	1.1309	1.1309	1.1299	1.1285	1.1269	1.1235	1.1187	1.1119	1.1066	1.1023	1.0960	1.0915	1.0882	1.0845	1.0803	1.0742	1.0694	1.0658	100		
125	.88004	1.0587	1.1044	1.1203	1.1261	1.1279	1.1277	1.1266	1.1252	1.1235	1.1199	1.1149	1.1078	1.1023	1.0978	1.0912	1.0865	1.0829	1.0790	1.0745	1.0678	1.0624	<			