90*th* PERCENTILES FOR THE *F* DISTRIBUTION [F_{ν_1,ν_2}]

[Calculated with *qf* in **R** Version 2.0.1 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 $\Pr(Y \le y) = 0.9$ (ν_1 is the numerator, ν_2 the denominator, degrees of freedom)

$Df \rightarrow$ / ν_2 \ ν_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	39.863	49.500	53.593	55.833	57.240	58.204	58.906	59.439	59.858	60.195	60.705	61.220	61.740	62.055	62.265	62.529	62.688	62.794	62.901	63.007	63.145	63.236	63.296	1
2	8.5263	9.0000	9.1618	9.2434	9.2926	9.3255	9.3491	9.3668	9.3805	9.3916	9.4081	9.4247	9.4413	9.4513	9.4579	9.4662	9.4712	9.4746	9.4779	9.4812	9.4855	9.4884	9.4902	
3	5.5383	5.4624	5.3908	5.3426	5.3092	5.2847	5.2662	5.2517	5.2400	5.2304	5.2156	5.2003	5.1845	5.1747	5.1681	5.1597	5.1546	5.1512	5.1477	5.1443	5.1398	5.1367	5.1348	
4	4.5448	4.3246	4.1909	4.1072	4.0506	4.0097	3.9790	3.9549	3.9357	3.9199	3.8955	3.8704	3.8443	3.8283	3.8174	3.8036	3.7952	3.7896	3.7839	3.7782	3.7707	3.7657	3.7625	
5	4.0604	3.7797	3.6195	3.5202	3.4530	3.4045	3.3679	3.3393	3.3163	3.2974	3.2682	3.2380	3.2067	3.1873	3.1741	3.1573	3.1471	3.1402	3.1333	3.1263	3.1172	3.1111	3.1072	5
6	3.7759	3.4633	3.2888	3.1808	3.1075	3.0546	3.0145	2.9830	2.9577	2.9369	2.9047	2.8712	2.8363	2.8147	2.8000	2.7812	2.7697	2.7620	2.7541	2.7463	2.7360	2.7291	2.7246	
7	3.5894	3.2574	3.0741	2.9605	2.8833	2.8274	2.7849	2.7516	2.7247	2.7025	2.6681	2.6322	2.5947	2.5714	2.5555	2.5351	2.5226	2.5142	2.5057	2.4971	2.4859	2.4784	2.4735	
8	3.4579	3.1131	2.9238	2.8064	2.7264	2.6683	2.6241	2.5893	2.5612	2.5380	2.5020	2.4642	2.4246	2.3999	2.3830	2.3614	2.3481	2.3391	2.3300	2.3208	2.3088	2.3007	2.2954	
9	3.3603	3.0065	2.8129	2.6927	2.6106	2.5509	2.5053	2.4694	2.4403	2.4163	2.3789	2.3396	2.2983	2.2725	2.2547	2.2320	2.2180	2.2085	2.1989	2.1892	2.1765	2.1679	2.1623	
10	3.2850	2.9245	2.7277	2.6053	2.5216	2.4606	2.4140	2.3772	2.3473	2.3226	2.2841	2.2435	2.2007	2.1739	2.1554	2.1317	2.1171	2.1072	2.0971	2.0869	2.0736	2.0646	2.0586	10
11	3.2252	2.8595	2.6602	2.5362	2.4512	2.3891	2.3416	2.3040	2.2735	2.2482	2.2087	2.1671	2.1230	2.0953	2.0762	2.0516	2.0364	2.0261	2.0157	2.0050	1.9911	1.9817	1.9755	
12	3.1765	2.8068	2.6055	2.4801	2.3940	2.3310	2.2828	2.2446	2.2135	2.1878	2.1474	2.1049	2.0597	2.0312	2.0115	1.9861	1.9704	1.9597	1.9489	1.9379	1.9234	1.9136	1.9071	
13	3.1362	2.7632	2.5603	2.4337	2.3467	2.2830	2.2341	2.1953	2.1638	2.1376	2.0966	2.0532	2.0070	1.9778	1.9576	1.9315	1.9153	1.9043	1.8931	1.8817	1.8667	1.8565	1.8498	
14	3.1022	2.7265	2.5222	2.3947	2.3069	2.2426	2.1931	2.1539	2.1220	2.0954	2.0537	2.0095	1.9625	1.9326	1.9119	1.8852	1.8686	1.8572	1.8457	1.8340	1.8185	1.8080	1.8011	
15	3.0732	2.6952	2.4898	2.3614	2.2730	2.2081	2.1582	2.1185	2.0862	2.0593	2.0171	1.9722	1.9243	1.8939	1.8728	1.8454	1.8284	1.8168	1.8049	1.7929	1.7770	1.7661	1.7589	15
16	3.0481	2.6682	2.4618	2.3327	2.2438	2.1783	2.1280	2.0880	2.0553	2.0281	1.9854	1.9399	1.8913	1.8603	1.8388	1.8108	1.7934	1.7816	1.7694	1.7570	1.7407	1.7296	1.7222	
17	3.0262	2.6446	2.4374	2.3077	2.2183	2.1524	2.1017	2.0613	2.0284	2.0009	1.9577	1.9117	1.8624	1.8309	1.8090	1.7805	1.7628	1.7506	1.7382	1.7255	1.7088	1.6973	1.6898	
18	3.0070	2.6239	2.4160	2.2858	2.1958	2.1296	2.0785	2.0379	2.0047	1.9770	1.9333	1.8868	1.8368	1.8049	1.7827	1.7537	1.7356	1.7232	1.7106	1.6976	1.6805	1.6687	1.6609	
19	2.9899	2.6056	2.3970	2.2663	2.1760	2.1094	2.0580	2.0171	1.9836	1.9557	1.9117	1.8647	1.8142	1.7818	1.7592	1.7298	1.7114	1.6988	1.6858	1.6726	1.6551	1.6431	1.6351	
20	2.9747	2.5893	2.3801	2.2489	2.1582	2.0913	2.0397	1.9985	1.9649	1.9367	1.8924	1.8449	1.7938	1.7611	1.7382	1.7083	1.6896	1.6768	1.6636	1.6501	1.6323	1.6200	1.6118	20
22	2.9486	2.5613	2.3512	2.2193	2.1279	2.0605	2.0084	1.9668	1.9327	1.9043	1.8593	1.8111	1.7590	1.7255	1.7021	1.6714	1.6521	1.6389	1.6253	1.6113	1.5927	1.5799	1.5714	
24	2.9271	2.5383	2.3274	2.1949	2.1030	2.0351	1.9826	1.9407	1.9063	1.8775	1.8319	1.7831	1.7302	1.6960	1.6721	1.6407	1.6209	1.6073	1.5933	1.5788	1.5596	1.5464	1.5375	
26	2.9091	2.5191	2.3075	2.1745	2.0822	2.0139	1.9610	1.9188	1.8841	1.8550	1.8090	1.7596	1.7059	1.6712	1.6468	1.6147	1.5945	1.5805	1.5661	1.5513	1.5315	1.5178	1.5086	
28	2.8938	2.5028	2.2906	2.1571	2.0645	1.9959	1.9427	1.9001	1.8652	1.8359	1.7895	1.7395	1.6852	1.6500	1.6252	1.5925	1.5718	1.5575	1.5428	1.5276	1.5072	1.4931	1.4836	
30	2.8807	2.4887	2.2761	2.1422	2.0492	1.9803	1.9269	1.8841	1.8490	1.8195	1.7727	1.7223	1.6673	1.6316	1.6065	1.5732	1.5522	1.5376	1.5225	1.5069	1.4860	1.4715	1.4617	30
35	2.8547	2.4609	2.2474	2.1128	2.0191	1.9496	1.8957	1.8524	1.8168	1.7869	1.7394	1.6880	1.6317	1.5950	1.5691	1.5346	1.5127	1.4975	1.4817	1.4653	1.4431	1.4277	1.4172	
40	2.8354	2.4404	2.2261	2.0909	1.9968	1.9269	1.8725	1.8289	1.7929	1.7627	1.7146	1.6624	1.6052	1.5677	1.5411	1.5056	1.4830	1.4672	1.4507	1.4336	1.4104	1.3941	1.3830	
45	2.8205	2.4245	2.2097	2.0742	1.9796	1.9094	1.8547	1.8107	1.7745	1.7440	1.6954	1.6426	1.5846	1.5464	1.5193	1.4830	1.4597	1.4434	1.4264	1.4087	1.3845	1.3674	1.3558	
50	2.8087	2.4120	2.1967	2.0608	1.9660	1.8954	1.8405	1.7963	1.7598	1.7291	1.6802	1.6269	1.5681	1.5294	1.5018	1.4648	1.4409	1.4242	1.4068	1.3885	1.3634	1.3456	1.3334	50
60	2.7911	2.3933	2.1774	2.0410	1.9457	1.8747	1.8194	1.7748	1.7380	1.7070	1.6574	1.6034	1.5435	1.5039	1.4755	1.4373	1.4126	1.3952	1.3769	1.3576	1.3311	1.3120	1.2988	
70	2.7786	2.3800	2.1637	2.0269	1.9313	1.8600	1.8044	1.7596	1.7225	1.6913	1.6413	1.5866	1.5259	1.4857	1.4567	1.4176	1.3922	1.3742	1.3552	1.3352	1.3073	1.2871	1.2730	
80	2.7693	2.3701	2.1535	2.0165	1.9206	1.8491	1.7933	1.7483	1.7110	1.6796	1.6292	1.5741	1.5128	1.4720	1.4426	1.4027	1.3767	1.3583	1.3388	1.3180	1.2890	1.2678	1.2530	
90	2.7621	2.3625	2.1457	2.0084	1.9123	1.8406	1.7846	1.7395	1.7021	1.6705	1.6199	1.5644	1.5025	1.4613	1.4315	1.3911	1.3646	1.3457	1.3258	1.3044	1.2745	1.2524	1.2368	
100	2.7564	2.3564	2.1394	2.0019	1.9057	1.8339	1.7778	1.7324	1.6949	1.6632	1.6124	1.5566	1.4943	1.4528	1.4227	1.3817	1.3548	1.3356	1.3153	1.2934	1.2626	1.2397	1.2235	100
125	2.7461	2.3455	2.1281	1.9904	1.8939	1.8218	1.7654	1.7199	1.6821	1.6502	1.5990	1.5427	1.4796	1.4374	1.4067	1.3648	1.3371	1.3173	1.2961	1.2732	1.2406	1.2160	1.1983	
150	2.7393	2.3383	2.1207	1.9827	1.8861	1.8138	1.7572	1.7115	1.6736	1.6416	1.5901	1.5334	1.4698	1.4271	1.3960	1.3534	1.3251	1.3048	1.2831	1.2595	1.2255	1.1995	1.1805	
175	2.7344	2.3331	2.1153	1.9773	1.8805	1.8081	1.7514	1.7056	1.6676	1.6354	1.5837	1.5268	1.4628	1.4197	1.3884	1.3452	1.3165	1.2959	1.2736	1.2494	1.2143	1.1872	1.1671	
200	2.7308	2.3293	2.1114	1.9732	1.8763	1.8038	1.7470	1.7011	1.6630	1.6308	1.5789	1.5218	1.4575	1.4142	1.3826	1.3390	1.3100	1.2891	1.2665	1.2418	1.2058	1.1776	1.1566	
250	2.7257	2.3239	2.1058	1.9675	1.8704	1.7978	1.7409	1.6949	1.6567	1.6244	1.5723	1.5149	1.4501	1.4064	1.3745	1.3304	1.3009	1.2795	1.2564	1.2310	1.1935	1.1638	1.1411	250
300	2.7223	2.3203	2.1021	1.9637	1.8666	1.7938	1.7369	1.6908	1.6525	1.6201	1.5679	1.5102	1.4452	1.4012	1.3691	1.3246	1.2947	1.2730	1.2495	1.2236	1.1851	1.1541	1.1301	
350	2.7199	2.3178	2.0995	1.9610	1.8638	1.7910	1.7340	1.6878	1.6495	1.6170	1.5647	1.5069	1.4417	1.3975	1.3652	1.3204	1.2903	1.2684	1.2446	1.2183	1.1789	1.1470	1.1218	
400	2.7181	2.3159	2.0975	1.9590	1.8617	1.7889	1.7318	1.6856	1.6472	1.6147	1.5623	1.5045	1.4391	1.3948	1.3623	1.3173	1.2870	1.2649	1.2409	1.2143	1.1743	1.1415	1.1153	
450	2.7167	2.3144	2.0960	1.9574	1.8601	1.7872	1.7301	1.6839	1.6455	1.6129	1.5605	1.5025	1.4370	1.3926	1.3601	1.3148	1.2844	1.2622	1.2380	1.2111	1.1706	1.1371	1.1101	
500	2.7156	2.3132	2.0948	1.9561	1.8588	1.7859	1.7288	1.6825	1.6441	1.6115	1.5590	1.5010	1.4354	1.3909	1.3582	1.3129	1.2823	1.2600	1.2356	1.2086	1.1676	1.1336	1.1058	500
600	2.7139	2.3114	2.0929	1.9543	1.8569	1.7840	1.7268	1.6805	1.6420	1.6094	1.5568	1.4987	1.4329	1.3883	1.3555	1.3099	1.2792	1.2567	1.2321	1.2047	1.1631	1.1281	1.0991	
700	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	
800	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	
900	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	
1,000	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
2,000	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	
3,000	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	
4,000	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	
5,000	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	
7,500	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	
10,000	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
	1	2	3	4	5	6	7	8	9	10	12	15	20	25	30	40	50	60	75	100	175	350	1,000	

F_{ν_1,ν_2} .90

F_{ν_1,ν_2} .90

2017-02-20

University of Waterloo

W.H. Cherry

95*th* PERCENTILES FOR THE *F* DISTRIBUTION [F_{ν_1,ν_2}]

[Calculated with *qf* in **R** Version 2.0.1 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 $\Pr(Y \le y) = 0.95$ (ν_1 is the numerator, ν_2 the denominator, degrees of freedom)

2017-02-20 University of Waterloo

$Df \rightarrow$ / ν_2 / ν_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	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88	243.91	245.95	248.01	249.26	250.10	251.14	251.77	252.20	252.62	253.04	253.59	253.95	254.19	1
2	18.513	19.000	19.164	19.247	19.296	19.330	19.353	19.371	19.385	19.396	19.413	19.429	19.446	19.456	19.462	19.471	19.476	19.479	19.482	19.486	19.490	19.493	19.495	
3	10.128	9.5521	9.2766	9.1172	9.0135	8.9406	8.8867	8.8452	8.8123	8.7855	8.7446	8.7029	8.6602	8.6341	8.6166	8.5944	8.5810	8.5720	8.5630	8.5539	8.5422	8.5343	8.5292	
4	7.7086	6.9443	6.5914	6.3882	6.2561	6.1631	6.0942	6.0410	5.9988	5.9644	5.9117	5.8578	5.8025	5.7687	5.7459	5.7170	5.6995	5.6877	5.6759	5.6641	5.6487	5.6384	5.6317	
5	6.6079	5.7861	5.4095	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351	4.6777	4.6188	4.5581	4.5209	4.4957	4.4638	4.4444	4.4314	4.4183	4.4051	4.3880	4.3765	4.3690	5
6	5.9874	5.1433	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.0990	4.0600	3.9999	3.9381	3.8742	3.8348	3.8082	3.7743	3.7537	3.7398	3.7258	3.7117	3.6935	3.6812	3.6732	
7	5.5914	4.7374	4.3468	4.1203	3.9715	3.8660	3.7870	3.7257	3.6767	3.6365	3.5747	3.5107	3.4445	3.4036	3.3758	3.3404	3.3189	3.3043	3.2897	3.2749	3.2557	3.2428	3.2343	
8	5.3177	4.4590	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472	3.2839	3.2184	3.1503	3.1081	3.0794	3.0428	3.0204	3.0053	2.9901	2.9747	2.9547	2.9412	2.9324	
9	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373	3.0729	3.0061	2.9365	2.8932	2.8637	2.8259	2.8028	2.7872	2.7715	2.7556	2.7348	2.7208	2.7116	
10	4.9646	4.1028	3.7083	3.4780	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782	2.9130	2.8450	2.7740	2.7298	2.6996	2.6609	2.6371	2.6211	2.6048	2.5884	2.5670	2.5525	2.5430	10
11	4.8443	3.9823	3.5874	3.3567	3.2039	3.0946	3.0123	2.9480	2.8962	2.8536	2.7876	2.7186	2.6464	2.6014	2.5705	2.5309	2.5066	2.4901	2.4734	2.4566	2.4345	2.4196	2.4098	
12	4.7472	3.8853	3.4903	3.2592	3.1059	2.9961	2.9134	2.8486	2.7964	2.7534	2.6866	2.6169	2.5436	2.4977	2.4663	2.4259	2.4010	2.3842	2.3671	2.3498	2.3271	2.3118	2.3017	
13	4.6672	3.8056	3.4105	3.1791	3.0254	2.9153	2.8321	2.7669	2.7144	2.6710	2.6037	2.5331	2.4589	2.4123	2.3803	2.3392	2.3138	2.2966	2.2791	2.2614	2.2382	2.2224	2.2121	
14	4.6001	3.7389	3.4339	3.1122	2.9582	2.8477	2.7642	2.6987	2.6458	2.6022	2.5342	2.4630	2.3879	2.3407	2.3082	2.2664	2.2405	2.2229	2.2051	2.1870	2.1632	2.1471	2.1365	
15	4.5431	3.6823	3.2874	3.0556	2.9013	2.7905	2.7066	2.6408	2.5876	2.5437	2.4753	2.4034	2.3275	2.2797	2.2468	2.2043	2.1780	2.1601	2.1419	2.1234	2.0992	2.0826	2.0718	15
16	4.4940	3.6337	3.2389	3.0069	2.8524	2.7413	2.6572	2.5911	2.5377	2.4935	2.4247	2.3522	2.2756	2.2272	2.1938	2.1507	2.1240	2.1058	2.0873	2.0685	2.0437	2.0268	2.0157	
17	4.4513	3.5915	3.1968	2.9647	2.8100	2.6987	2.6143	2.5480	2.4943	2.4499	2.3807	2.3077	2.2304	2.1815	2.1477	2.1040	2.0769	2.0584	2.0396	2.0204	1.9952	1.9779	1.9666	
18	4.4139	3.5546	3.1599	2.9277	2.7729	2.6613	2.5767	2.5102	2.4563	2.4117	2.3421	2.2686	2.1906	2.1413	2.1071	2.0629	2.0354	2.0166	1.9975	1.9780	1.9523	1.9348	1.9232	
19	4.3807	3.5219	3.1274	2.8951	2.7401	2.6283	2.5435	2.4768	2.4227	2.3779	2.3080	2.2341	2.1555	2.1057	2.0712	2.0264	1.9986	1.9795	1.9601	1.9403	1.9142	1.8963	1.8845	
20	4.3512	3.4928	3.0984	2.8661	2.7109	2.5990	2.5140	2.4471	2.3928	2.3479	2.2776	2.2033	2.1242	2.0739	2.0391	1.9938	1.9656	1.9464	1.9267	1.9066	1.8800	1.8618	1.8497	20
22	4.3009	3.4434	3.0491	2.8167	2.6613	2.5491	2.4638	2.3965	2.3419	2.2967	2.2258	2.1508	2.0707	2.0196	1.9842	1.9380	1.9092	1.8894	1.8692	1.8486	1.8212	1.8024	1.7899	
24	4.2597	3.4028	3.0088	2.7763	2.6207	2.5082	2.4226	2.3551	2.3002	2.2547	2.1834	2.1077	2.0267	1.9750	1.9390	1.8920	1.8625	1.8424	1.8217	1.8005	1.7723	1.7529	1.7401	
26	4.2252	3.3690	2.9752	2.7426	2.5868	2.4741	2.3883	2.3205	2.2655	2.2197	2.1479	2.0716	1.9898	1.9375	1.9010	1.8533	1.8233	1.8027	1.7816	1.7599	1.7310	1.7111	1.6978	
28	4.1960	3.3404	2.9467	2.7141	2.5581	2.4453	2.3593	2.2913	2.2360	2.1900	2.1179	2.0411	1.9586	1.9057	1.8687	1.8203	1.7898	1.7689	1.7473	1.7251	1.6956	1.6752	1.6615	
30	4.1709	3.3158	2.9223	2.6896	2.5336	2.4205	2.3343	2.2662	2.2107	2.1646	2.0921	2.0148	1.9317	1.8782	1.8409	1.7918	1.7609	1.7396	1.7176	1.6950	1.6648	1.6439	1.6299	30
35	4.1213	3.2674	2.8742	2.6415	2.4851	2.3718	2.2852	2.2167	2.1608	2.1143	2.0411	1.9629	1.8784	1.8239	1.7856	1.7351	1.7032	1.6811	1.6583	1.6347	1.6030	1.5809	1.5661	
40	4.0847	3.2317	2.8387	2.6060	2.4495	2.3359	2.2490	2.1802	2.1240	2.0772	2.0035	1.9245	1.8389	1.7835	1.7444	1.6928	1.6600	1.6373	1.6137	1.5892	1.5562	1.5331	1.5175	
45	4.0566	3.2043	2.8115	2.5787	2.4221	2.3083	2.2212	2.1521	2.0958	2.0487	1.9745	1.8949	1.8084	1.7522	1.7126	1.6599	1.6264	1.6031	1.5789	1.5536	1.5194	1.4953	1.4790	
50	4.0343	3.1826	2.7900	2.5572	2.4004	2.2864	2.1992	2.1299	2.0734	2.0261	1.9515	1.8714	1.7841	1.7273	1.6872	1.6337	1.5995	1.5757	1.5508	1.5249	1.4896	1.4647	1.4477	50
60	4.0012	3.1504	2.7581	2.5252	2.3683	2.2541	2.1665	2.0970	2.0401	1.9926	1.9174	1.8364	1.7480	1.6902	1.6491	1.5943	1.5590	1.5343	1.5085	1.4814	1.4442	1.4176	1.3994	
70	3.9778	3.1277	2.7355	2.5027	2.3456	2.2312	2.1435	2.0737	2.0166	1.9689	1.8932	1.8117	1.7223	1.6638	1.6220	1.5661	1.5300	1.5046	1.4779	1.4498	1.4110	1.3831	1.3638	
80	3.9604	3.1108	2.7188	2.4859	2.3287	2.2142	2.1263	2.0564	1.9991	1.9512	1.8753	1.7932	1.7032	1.6440	1.6017	1.5449	1.5081	1.4821	1.4548	1.4259	1.3857	1.3565	1.3362	
90	3.9469	3.0977	2.7058	2.4729	2.3157	2.2011	2.1131	2.0430	1.9856	1.9376	1.8613	1.7789	1.6883	1.6286	1.5859	1.5284	1.4910	1.4645	1.4366	1.4070	1.3656	1.3353	1.3140	
100	3.9361	3.0873	2.6955	2.4626	2.3053	2.1906	2.1025	2.0323	1.9748	1.9267	1.8503	1.7675	1.6764	1.6163	1.5733	1.5151	1.4772	1.4504	1.4220	1.3917	1.3492	1.3179	1.2958	100
125	3.9169	3.0687	2.6771	2.4442	2.2868	2.1719	2.0836	2.0133	1.9556	1.9072	1.8304	1.7471	1.6551	1.5943	1.5505	1.4912	1.4524	1.4247	1.3953	1.3638	1.3191	1.2856	1.2616	
150	3.9042	3.0564	2.6649	2.4320	2.2745	2.1595	2.0711	2.0006	1.9428	1.8943	1.8172	1.7335	1.6410	1.5796	1.5354	1.4752	1.4357	1.4074	1.3773	1.3448	1.2984	1.2631	1.2375	
175	3.8951	3.0476	2.6562	2.4233	2.2658	2.1507	2.0622	1.9916	1.9337	1.8851	1.8078	1.7239	1.6309	1.5691	1.5245	1.4637	1.4237	1.3950	1.3643	1.3311	1.2832	1.2465	1.2195	
200	3.8884	3.0411	2.6498	2.4168	2.2592	2.1441	2.0556	1.9849	1.9269	1.8783	1.8008	1.7166	1.6233	1.5612	1.5164	1.4551	1.4146	1.3856	1.3545	1.3206	1.2716	1.2336	1.2054	
250	3.8789	3.0319	2.6407	2.4078	2.2501	2.1350	2.0463	1.9756	1.9174	1.8687	1.7910	1.7065	1.6127	1.5502	1.5049	1.4430	1.4019	1.3723	1.3405	1.3058	1.2550	1.2150	1.1847	250
300	3.8726	3.0258	2.6347	2.4017	2.2441	2.1289	2.0402	1.9693	1.9112	1.8623	1.7845	1.6998	1.6057	1.5428	1.4973	1.4349	1.3934	1.3634	1.3312	1.2958	1.2436	1.2021	1.1700	
350	3.8682	3.0215	2.6304	2.3975	2.2398	2.1245	2.0358	1.9649	1.9067	1.8578	1.7799	1.6950	1.6006	1.5376	1.4919	1.4291	1.3873	1.3571	1.3244	1.2885	1.2353	1.1925	1.1590	
400	3.8648	3.0183	2.6272	2.3942	2.2366	2.1212	2.0325	1.9616	1.9033	1.8544	1.7764	1.6914	1.5969	1.5337	1.4878	1.4247	1.3827	1.3522	1.3193	1.2831	1.2290	1.1852	1.1504	
450	3.8622	3.0158	2.6247	2.3918	2.2340	2.1187	2.0299	1.9590	1.9007	1.8517	1.7737	1.6887	1.5939	1.5306	1.4846	1.4213	1.3791	1.3485	1.3153	1.2788	1.2241	1.1794	1.1435	
500	3.8601	3.0138	2.6227	2.3898	2.2320	2.1167	2.0279	1.9569	1.8986	1.8496	1.7715	1.6864	1.5916	1.5282	1.4821	1.4186	1.3762	1.3455	1.3122	1.2753	1.2201	1.1746	1.1378	500
600	3.8570	3.0107	2.6198	2.3868	2.2290	2.1137	2.0248	1.9538	1.8955	1.8465	1.7683	1.6831	1.5881	1.5245	1.4782	1.4145	1.3719	1.3409	1.3073	1.2701	1.2140	1.1674	1.1289	
700	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	
800	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	
900	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	
1,000	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	1,000
2,000	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	
3,000	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	
4,000	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	
5,000	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	
7,500	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	
10,000	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	10,000
	1	2	3	4	5	6	7	8	9	10	12	15	20	25	30	40	50	60	75	100	175	350	1,000	

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F_{ν_1,ν_2} .95

W.H. Cherry