

Distribuição F

$\alpha = 0.05$ na cauda direita

		Número de graus de liberdade no Numerador (gl_1)																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Número de graus de liberdade do Denominador (gl_2)	1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88	242.98	243.90	244.69	245.36	245.95	246.47	246.92	247.32	247.69
	2	18.513	19.000	19.164	19.247	19.296	19.329	19.353	19.371	19.385	19.396	19.405	19.412	19.419	19.424	19.429	19.433	19.437	19.440	19.443
	3	10.128	9.552	9.277	9.117	9.013	8.941	8.887	8.845	8.812	8.785	8.763	8.745	8.729	8.715	8.703	8.692	8.683	8.675	8.667
	4	7.709	6.944	6.5914	6.3882	6.2561	6.1631	6.0942	6.0410	5.9988	5.9644	5.9358	5.9117	5.8911	5.8733	5.8578	5.8441	5.8320	5.8211	5.8114
	5	6.608	5.7861	5.4094	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351	4.7040	4.6777	4.6552	4.6358	4.6188	4.6038	4.5904	4.5785	4.5678
	6	5.9874	5.1432	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.0990	4.0600	4.0274	3.9999	3.9764	3.9559	3.9381	3.9223	3.9083	3.8957	3.8844
	7	5.5915	4.7374	4.3468	4.1203	3.9715	3.8660	3.7871	3.7257	3.6767	3.6365	3.6030	3.5747	3.5503	3.5292	3.5107	3.4944	3.4799	3.4669	3.4551
	8	5.3176	4.4590	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472	3.3129	3.2839	3.2590	3.2374	3.2184	3.2016	3.1867	3.1733	3.1612
	9	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373	3.1025	3.0729	3.0475	3.0255	3.0061	2.9890	2.9737	2.9600	2.9477
	10	4.9646	4.1028	3.7083	3.4780	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782	2.9430	2.9130	2.8872	2.8647	2.8450	2.8276	2.8120	2.7980	2.7854
	11	4.8443	3.9823	3.5874	3.3567	3.2039	3.0946	3.0123	2.9480	2.8962	2.8536	2.8179	2.7876	2.7614	2.7386	2.7186	2.7009	2.6851	2.6709	2.6581
	12	4.7472	3.8853	3.4903	3.2592	3.1059	2.9961	2.9134	2.8486	2.7964	2.7534	2.7173	2.6866	2.6602	2.6371	2.6169	2.5989	2.5828	2.5684	2.5554
	13	4.6672	3.8056	3.4105	3.1791	3.0254	2.9153	2.8321	2.7669	2.7144	2.6710	2.6346	2.6037	2.5769	2.5536	2.5331	2.5149	2.4987	2.4841	2.4709
	14	4.6001	3.7389	3.3439	3.1122	2.9582	2.8477	2.7642	2.6987	2.6458	2.6022	2.5655	2.5342	2.5073	2.4837	2.4630	2.4446	2.4282	2.4134	2.4000
	15	4.5431	3.6823	3.2874	3.0556	2.9013	2.7905	2.7066	2.6408	2.5876	2.5437	2.5068	2.4753	2.4481	2.4244	2.4034	2.3849	2.3683	2.3533	2.3398
	16	4.4940	3.6337	3.2389	3.0069	2.8524	2.7413	2.6572	2.5911	2.5377	2.4935	2.4564	2.4247	2.3973	2.3733	2.3522	2.3335	2.3167	2.3016	2.2880
	17	4.4513	3.5915	3.1968	2.9647	2.8100	2.6987	2.6143	2.5480	2.4943	2.4499	2.4126	2.3807	2.3531	2.3290	2.3077	2.2888	2.2719	2.2567	2.2429
	18	4.4139	3.5546	3.1599	2.9277	2.7729	2.6613	2.5767	2.5102	2.4563	2.4117	2.3742	2.3421	2.3143	2.2900	2.2686	2.2496	2.2325	2.2172	2.2033
	19	4.3808	3.5219	3.1274	2.8951	2.7401	2.6283	2.5435	2.4768	2.4227	2.3779	2.3402	2.3080	2.2800	2.2556	2.2341	2.2149	2.1977	2.1823	2.1682
	20	4.3513	3.4928	3.0984	2.8661	2.7109	2.5990	2.5140	2.4471	2.3928	2.3479	2.3100	2.2776	2.2495	2.2250	2.2033	2.1840	2.1667	2.1511	2.1370
	21	4.3248	3.4668	3.0725	2.8401	2.6848	2.5727	2.4876	2.4205	2.3661	2.3210	2.2829	2.2504	2.2222	2.1975	2.1757	2.1563	2.1389	2.1232	2.1090
	22	4.3009	3.4434	3.0491	2.8167	2.6613	2.5491	2.4638	2.3965	2.3419	2.2967	2.2585	2.2258	2.1975	2.1727	2.1508	2.1313	2.1138	2.0980	2.0837
	23	4.2793	3.4221	3.0280	2.7955	2.6400	2.5277	2.4422	2.3748	2.3201	2.2747	2.2364	2.2036	2.1752	2.1502	2.1282	2.1086	2.0910	2.0751	2.0608
	24	4.2597	3.4028	3.0088	2.7763	2.6207	2.5082	2.4226	2.3551	2.3002	2.2547	2.2163	2.1834	2.1548	2.1298	2.1077	2.0880	2.0703	2.0543	2.0399
	25	4.2417	3.3852	2.9912	2.7587	2.6030	2.4904	2.4047	2.3371	2.2821	2.2365	2.1979	2.1649	2.1362	2.1111	2.0889	2.0691	2.0513	2.0353	2.0207
	26	4.2252	3.3690	2.9752	2.7426	2.5868	2.4741	2.3883	2.3205	2.2655	2.2197	2.1811	2.1479	2.1192	2.0939	2.0716	2.0518	2.0339	2.0178	2.0032
	27	4.2100	3.3541	2.9603	2.7278	2.5719	2.4591	2.3732	2.3053	2.2501	2.2043	2.1655	2.1323	2.1034	2.0781	2.0558	2.0358	2.0179	2.0017	1.9870
	28	4.1960	3.3404	2.9467	2.7141	2.5581	2.4453	2.3593	2.2913	2.2360	2.1900	2.1512	2.1179	2.0889	2.0635	2.0411	2.0210	2.0030	1.9868	1.9720
	29	4.1830	3.3277	2.9340	2.7014	2.5454	2.4324	2.3463	2.2782	2.2229	2.1768	2.1379	2.1045	2.0755	2.0500	2.0275	2.0073	1.9893	1.9730	1.9581
	30	4.1709	3.3158	2.9223	2.6896	2.5336	2.4205	2.3343	2.2662	2.2107	2.1646	2.1256	2.0921	2.0630	2.0374	2.0148	1.9946	1.9765	1.9601	1.9452
	40	4.0847	3.2317	2.8387	2.6060	2.4495	2.3359	2.2490	2.1802	2.1240	2.0773	2.0376	2.0035	1.9738	1.9476	1.9245	1.9038	1.8851	1.8682	1.8529
50	4.0343	3.1826	2.7900	2.5572	2.4004	2.2864	2.1992	2.1299	2.0733	2.0261	1.9861	1.9515	1.9214	1.8949	1.8714	1.8503	1.8313	1.8141	1.7985	
60	4.0012	3.1504	2.7581	2.5252	2.3683	2.2541	2.1665	2.0970	2.0401	1.9926	1.9522	1.9174	1.8870	1.8602	1.8364	1.8151	1.7959	1.7784	1.7625	
120	3.9201	3.0718	2.6802	2.4472	2.2899	2.1750	2.0868	2.0164	1.9588	1.9105	1.8693	1.8337	1.8026	1.7750	1.7505	1.7285	1.7085	1.6904	1.6739	
500	3.8601	3.0138	2.6227	2.3898	2.2320	2.1167	2.0279	1.9569	1.8986	1.8496	1.8078	1.7716	1.7398	1.7116	1.6864	1.6638	1.6432	1.6245	1.6074	
1000	3.8508	3.0047	2.6138	2.3808	2.2231	2.1076	2.0187	1.9476	1.8892	1.8402	1.7982	1.7618	1.7299	1.7017	1.6764	1.6536	1.6330	1.6142	1.5969	
1.E+05	3.8415	2.9958	2.6050	2.3720	2.2142	2.0987	2.0097	1.9385	1.8800	1.8308	1.7887	1.7523	1.7203	1.6919	1.6665	1.6436	1.6229	1.6040	1.5866	
1.E+08	3.8414	2.9957	2.6049	2.3719	2.2141	2.0986	2.0096	1.9384	1.8799	1.8307	1.7886	1.7522	1.7202	1.6918	1.6664	1.6435	1.6228	1.6039	1.5865	

Distribuição F

$\alpha = 0.05$ na cauda direita

		Número de graus de liberdade no Numerador (gl ₁)																			
		20	21	22	23	24	25	26	27	28	29	30	40	50	60	120	500	1000	1.E+05	1.E+08	
Número de graus de liberdade do Denominador (gl ₂)	1	248.02	248.31	248.58	248.82	249.05	249.26	249.45	249.63	249.8	250.0	250.1	251.1	251.8	252.2	253.3	254.1	254.2	254.3	254.3	
	2	19.446	19.448	19.450	19.452	19.454	19.456	19.457	19.459	19.460	19.461	19.463	19.471	19.476	19.479	19.487	19.494	19.495	19.496	19.496	19.496
	3	8.660	8.654	8.648	8.643	8.638	8.634	8.630	8.626	8.623	8.620	8.617	8.594	8.581	8.572	8.549	8.532	8.529	8.527	8.527	8.526
	4	5.8025	5.7945	5.7872	5.7805	5.7744	5.7687	5.7635	5.7586	5.7541	5.7498	5.7459	5.7170	5.6995	5.6878	5.6581	5.6353	5.6317	5.6281	5.6281	5.6281
	5	4.5581	4.5493	4.5413	4.5339	4.5272	4.5209	4.5151	4.5097	4.5048	4.5001	4.4957	4.4638	4.4444	4.4314	4.3985	4.3731	4.3690	4.3650	4.3650	4.3650
	6	3.8742	3.8649	3.8564	3.8486	3.8414	3.8348	3.8287	3.8230	3.8177	3.8128	3.8082	3.7743	3.7537	3.7398	3.7047	3.6775	3.6732	3.6689	3.6689	3.6689
	7	3.4445	3.4349	3.4260	3.4180	3.4105	3.4036	3.3972	3.3913	3.3858	3.3806	3.3758	3.3404	3.3189	3.3043	3.2674	3.2389	3.2343	3.2298	3.2298	3.2298
	8	3.1503	3.1404	3.1313	3.1229	3.1152	3.1081	3.1015	3.0954	3.0897	3.0844	3.0794	3.0428	3.0204	3.0053	2.9669	2.9371	2.9324	2.9276	2.9276	2.9276
	9	2.9365	2.9263	2.9169	2.9084	2.9005	2.8932	2.8864	2.8801	2.8743	2.8688	2.8637	2.8259	2.8028	2.7872	2.7475	2.7166	2.7116	2.7067	2.7067	2.7067
	10	2.7740	2.7636	2.7541	2.7453	2.7373	2.7298	2.7229	2.7164	2.7104	2.7048	2.6996	2.6609	2.6371	2.6211	2.5801	2.5481	2.5430	2.5379	2.5379	2.5379
	11	2.6464	2.6358	2.6261	2.6172	2.6090	2.6014	2.5943	2.5877	2.5816	2.5759	2.5705	2.5309	2.5066	2.4901	2.4480	2.4151	2.4098	2.4045	2.4045	2.4045
	12	2.5436	2.5328	2.5229	2.5139	2.5055	2.4977	2.4905	2.4838	2.4776	2.4718	2.4663	2.4259	2.4010	2.3842	2.3410	2.3071	2.3017	2.2963	2.2962	2.2962
	13	2.4589	2.4479	2.4379	2.4287	2.4202	2.4123	2.4050	2.3982	2.3919	2.3859	2.3803	2.3392	2.3138	2.2966	2.2524	2.2176	2.2121	2.2065	2.2064	2.2064
	14	2.3879	2.3768	2.3667	2.3573	2.3487	2.3407	2.3333	2.3264	2.3199	2.3139	2.3082	2.2663	2.2405	2.2229	2.1778	2.1422	2.1365	2.1308	2.1307	2.1307
	15	2.3275	2.3163	2.3060	2.2966	2.2878	2.2797	2.2722	2.2652	2.2587	2.2525	2.2468	2.2043	2.1780	2.1601	2.1141	2.0776	2.0718	2.0659	2.0658	2.0658
	16	2.2756	2.2642	2.2538	2.2442	2.2354	2.2272	2.2196	2.2125	2.2059	2.1997	2.1938	2.1507	2.1240	2.1058	2.0589	2.0217	2.0157	2.0097	2.0096	2.0096
	17	2.2304	2.2189	2.2084	2.1987	2.1898	2.1815	2.1738	2.1666	2.1599	2.1536	2.1477	2.1040	2.0769	2.0584	2.0107	1.9727	1.9666	1.9604	1.9604	1.9604
	18	2.1906	2.1791	2.1685	2.1587	2.1497	2.1413	2.1335	2.1262	2.1195	2.1131	2.1071	2.0629	2.0354	2.0166	1.9681	1.9294	1.9232	1.9169	1.9168	1.9168
	19	2.1555	2.1438	2.1331	2.1233	2.1141	2.1057	2.0978	2.0905	2.0836	2.0772	2.0712	2.0264	1.9986	1.9795	1.9302	1.8909	1.8845	1.8781	1.8780	1.8780
	20	2.1242	2.1124	2.1016	2.0917	2.0825	2.0739	2.0660	2.0586	2.0517	2.0452	2.0391	1.9938	1.9656	1.9464	1.8963	1.8563	1.8497	1.8432	1.8432	1.8432
	21	2.0960	2.0842	2.0733	2.0633	2.0540	2.0454	2.0374	2.0299	2.0229	2.0164	2.0102	1.9645	1.9360	1.9165	1.8657	1.8250	1.8184	1.8118	1.8117	1.8117
	22	2.0707	2.0587	2.0478	2.0377	2.0283	2.0196	2.0116	2.0040	1.9970	1.9904	1.9842	1.9380	1.9092	1.8894	1.8380	1.7966	1.7899	1.7832	1.7831	1.7831
	23	2.0476	2.0356	2.0246	2.0144	2.0050	1.9963	1.9881	1.9805	1.9734	1.9668	1.9605	1.9139	1.8848	1.8648	1.8128	1.7708	1.7639	1.7571	1.7570	1.7570
	24	2.0267	2.0146	2.0035	1.9932	1.9838	1.9750	1.9668	1.9591	1.9520	1.9453	1.9390	1.8920	1.8625	1.8424	1.7896	1.7470	1.7401	1.7331	1.7330	1.7330
	25	2.0075	1.9953	1.9842	1.9738	1.9643	1.9554	1.9472	1.9395	1.9323	1.9255	1.9192	1.8718	1.8421	1.8217	1.7684	1.7252	1.7181	1.7111	1.7110	1.7110
	26	1.9898	1.9776	1.9664	1.9560	1.9464	1.9375	1.9292	1.9215	1.9142	1.9074	1.9010	1.8533	1.8233	1.8027	1.7488	1.7050	1.6978	1.6907	1.6906	1.6906
	27	1.9736	1.9613	1.9500	1.9396	1.9299	1.9210	1.9126	1.9048	1.8975	1.8907	1.8842	1.8361	1.8059	1.7851	1.7307	1.6863	1.6790	1.6718	1.6717	1.6717
	28	1.9586	1.9462	1.9349	1.9244	1.9147	1.9057	1.8973	1.8894	1.8821	1.8752	1.8687	1.8203	1.7898	1.7689	1.7138	1.6689	1.6615	1.6542	1.6541	1.6541
	29	1.9446	1.9322	1.9208	1.9103	1.9005	1.8915	1.8830	1.8751	1.8677	1.8608	1.8543	1.8055	1.7748	1.7537	1.6981	1.6527	1.6452	1.6377	1.6376	1.6376
	30	1.9317	1.9192	1.9077	1.8972	1.8874	1.8782	1.8698	1.8618	1.8544	1.8474	1.8409	1.7918	1.7609	1.7396	1.6835	1.6375	1.6299	1.6223	1.6223	1.6223
40	1.8389	1.8260	1.8141	1.8031	1.7929	1.7835	1.7746	1.7663	1.7586	1.7513	1.7444	1.6928	1.6600	1.6373	1.5766	1.5260	1.5175	1.5090	1.5089	1.5089	
50	1.7841	1.7709	1.7588	1.7475	1.7371	1.7273	1.7183	1.7097	1.7017	1.6942	1.6872	1.6337	1.5995	1.5757	1.5115	1.4569	1.4477	1.4384	1.4383	1.4383	
60	1.7480	1.7346	1.7222	1.7108	1.7001	1.6902	1.6809	1.6722	1.6641	1.6564	1.6491	1.5943	1.5590	1.5343	1.4673	1.4093	1.3994	1.3894	1.3893	1.3893	
120	1.6587	1.6447	1.6317	1.6197	1.6084	1.5980	1.5881	1.5789	1.5702	1.5621	1.5543	1.4952	1.4565	1.4290	1.3519	1.2804	1.2675	1.2540	1.2539	1.2539	
500	1.5916	1.5770	1.5635	1.5509	1.5392	1.5282	1.5178	1.5081	1.4989	1.4903	1.4821	1.4186	1.3762	1.3455	1.2551	1.1587	1.1378	1.1135	1.1132	1.1132	
1000	1.5811	1.5664	1.5528	1.5401	1.5282	1.5171	1.5067	1.4969	1.4876	1.4789	1.4706	1.4063	1.3632	1.3318	1.2385	1.1342	1.1097	1.0784	1.0781	1.0781	
1.E+05	1.5706	1.5558	1.5421	1.5293	1.5174	1.5062	1.4957	1.4858	1.4764	1.4676	1.4592	1.3941	1.3502	1.3182	1.2216	1.1066	1.0751	1.0105	1.0074	1.0074	
1.E+08	1.5705	1.5557	1.5420	1.5292	1.5173	1.5061	1.4956	1.4857	1.4763	1.4675	1.4591	1.3940	1.3501	1.3180	1.2214	1.1063	1.0747	1.1505	1.0000	1.0000	