

# Bonferroni Critical values for two-tailed tests with $\alpha = .100$

c = the number of comparisons to be made  
df = number of degrees of freedom for the error estimate

df	c:	2	3	4	5	6	7	8	9	10	11
2		4.3027	5.3393	6.2053	6.9646	7.6488	8.2767	8.8602	9.4076	9.9248	10.4164
3		3.1824	3.7405	4.1766	4.5407	4.8567	5.1377	5.3919	5.6251	5.8409	6.0423
4		2.7764	3.1863	3.4954	3.7470	3.9608	4.1478	4.3147	4.4657	4.6041	4.7320
5		2.5706	2.9117	3.1634	3.3649	3.5341	3.6805	3.8100	3.9263	4.0322	4.1293
6		2.4469	2.7491	2.9687	3.1427	3.2875	3.4119	3.5216	3.6190	3.7075	3.7884
7		2.3646	2.6419	2.8412	2.9980	3.1276	3.2383	3.3212	3.3912	3.4595	3.5195
8		2.3060	2.5660	2.7515	2.8965	3.0158	3.1174	3.2060	3.2846	3.3554	3.4198
9		2.2622	2.5096	2.6850	2.8214	2.9333	3.0283	3.1109	3.1841	3.2499	3.3095
10		2.2281	2.4660	2.6338	2.7638	2.8701	2.9601	3.0382	3.1073	3.1693	3.2254
11		2.2010	2.4313	2.5931	2.7181	2.8200	2.9062	2.9809	3.0468	3.1058	3.1593
12		2.1788	2.4030	2.5600	2.6810	2.7795	2.8626	2.9345	2.9979	3.0546	3.1059
13		2.1604	2.3796	2.5327	2.6503	2.7459	2.8265	2.8962	2.9575	3.0123	3.0618
14		2.1448	2.3598	2.5096	2.6245	2.7178	2.7962	2.8640	2.9236	2.9769	3.0249
15		2.1315	2.3429	2.4899	2.6025	2.6937	2.7705	2.8366	2.8948	2.9467	2.9936
16		2.1199	2.3283	2.4729	2.5835	2.6730	2.7482	2.8131	2.8700	2.9208	2.9666
17		2.1098	2.3156	2.4581	2.5669	2.6550	2.7289	2.7925	2.8484	2.8982	2.9431
18		2.1009	2.3044	2.4450	2.5524	2.6392	2.7119	2.7745	2.8295	2.8784	2.9226
19		2.0930	2.2944	2.4334	2.5395	2.6251	2.6969	2.7586	2.8127	2.8610	2.9044
20		2.0860	2.2855	2.4231	2.5280	2.6126	2.6834	2.7444	2.7978	2.8453	2.8882
21		2.0796	2.2775	2.4138	2.5176	2.6014	2.6714	2.7201	2.7723	2.8188	2.8605
22		2.0739	2.2703	2.4055	2.5083	2.5912	2.6606	2.7097	2.7614	2.8073	2.8487
23		2.0687	2.2637	2.3979	2.4999	2.5820	2.6507	2.7002	2.7514	2.7969	2.8379
24		2.0639	2.2578	2.3910	2.4922	2.5736	2.6418	2.6916	2.7423	2.7874	2.8280
25		2.0595	2.2523	2.3846	2.4851	2.5660	2.6336	2.6836	2.7340	2.7787	2.8190
26		2.0555	2.2472	2.3788	2.4786	2.5589	2.6260	2.6763	2.7263	2.7707	2.8106
27		2.0518	2.2426	2.3734	2.4727	2.5525	2.6191	2.6695	2.7191	2.7633	2.8029
28		2.0484	2.2383	2.3685	2.4671	2.5465	2.6127	2.6632	2.7126	2.7564	2.7958
29		2.0452	2.2344	2.3638	2.4620	2.5409	2.6068	2.6574	2.7064	2.7500	2.7892
30		2.0423	2.2306	2.3596	2.4573	2.5357	2.6012				

# Bonferroni Critical values for two-tailed tests with $\alpha = 0.050$

c = the number of comparisons to be made  
df = number of degrees of freedom for the error estimate

df	c:	2	3	4	5	6	7	8	9	10	11
2		6.2053	7.6488	8.8602	9.9248	10.8859	11.7686	12.590	13.360	14.089	14.782
3		4.1766	4.8567	5.3919	5.8409	6.2315	6.5797	6.895	7.185	7.453	7.704
4		3.4954	3.9608	4.3147	4.6041	4.8510	5.0675	5.261	5.437	5.598	5.747
5		3.1634	3.5341	3.8100	4.0322	4.2193	4.3817	4.526	4.655	4.773	4.882
6		2.9687	3.2875	3.5212	3.7075	3.8630	3.9971	4.115	4.221	4.317	4.405
7		2.8412	3.1276	3.3353	3.4995	3.6358	3.7527	3.855	3.947	4.029	4.105
8		2.7515	3.0158	3.2060	3.3554	3.4789	3.5844	3.677	3.759	3.833	3.900
9		2.6850	2.9333	3.1109	3.2499	3.3642	3.4616	3.547	3.622	3.690	3.751
10		2.6338	2.8701	3.0382	3.1693	3.2769	3.3682	3.448	3.518	3.581	3.639
11		2.5931	2.8200	2.9809	3.1058	3.2081	3.2949	3.370	3.437	3.497	3.551
12		2.5600	2.7795	2.9345	3.0546	3.1527	3.2358	3.308	3.371	3.428	3.480
13		2.5327	2.7459	2.8962	3.0123	3.1070	3.1871	3.256	3.318	3.372	3.422
14		2.5096	2.7178	2.8640	2.9769	3.0688	3.1464	3.214	3.273	3.326	3.374
15		2.4899	2.6937	2.8366	2.9467	3.0363	3.1118	3.177	3.235	3.286	3.333
16		2.4729	2.6730	2.8131	2.9208	3.0083	3.0821	3.146	3.202	3.252	3.297
17		2.4581	2.6550	2.7925	2.8982	2.9840	3.0563	3.119	3.173	3.222	3.267
18		2.4450	2.6392	2.7745	2.8784	2.9627	3.0336	3.095	3.149	3.197	3.240
19		2.4334	2.6251	2.7586	2.8610	2.9439	3.0136	3.074	3.127	3.174	3.216
20		2.4231	2.6126	2.7444	2.8453	2.9271	2.9958	3.055	3.107	3.153	3.195
21		2.4138	2.6014	2.7316	2.8314	2.9121	2.9799	3.038	3.090	3.135	3.176
22		2.4055	2.5912	2.7201	2.8188	2.8985	2.9655	3.023	3.074	3.119	3.159
23		2.3979	2.5820	2.7097	2.8073	2.8863	2.9525	3.009	3.059	3.104	3.144
24		2.3910	2.5736	2.7002	2.7969	2.8751	2.9406	2.997	3.046	3.091	3.130
25		2.3846	2.5660	2.6916	2.7874	2.8649	2.9298	2.986	3.035	3.078	3.117
26		2.3788	2.5589	2.6836	2.7787	2.8555	2.9199	2.975	3.024	3.067	3.106
27		2.3734	2.5525	2.6763	2.7707	2.8469	2.9107	2.966	3.014	3.057	3.095
28		2.3685	2.5465	2.6695	2.7633	2.8389	2.9023	2.957	3.004	3.047	3.085
29		2.3638	2.5409	2.6632	2.7564	2.8316	2.8945	2.949	2.996	3.038	3.076
30		2.3596	2.5357	2.6574	2.7500	2.8247	2.8872	2.941	2.988	3.030	3.067

# Bonferroni Critical values for two-tailed tests with $\alpha = 0.025$

c = the number of comparisons to be made  
df = number of degrees of freedom for the error estimate

df	c: 2	3	4	5	6	7	8	9	10	11
2	8.8602	10.8859	12.590	14.089	15.443	16.688	17.847	18.934	19.962	20.940
3	5.3919	6.2315	6.895	7.453	7.940	8.374	8.768	9.129	9.465	9.778
4	4.3147	4.8510	5.261	5.598	5.885	6.138	6.364	6.570	6.758	6.933
5	3.8100	4.2193	4.526	4.773	4.983	5.164	5.326	5.471	5.604	5.726
6	3.5212	3.8630	4.115	4.317	4.486	4.632	4.760	4.876	4.981	5.077
7	3.3353	3.6358	3.855	4.029	4.174	4.299	4.408	4.506	4.595	4.676
8	3.2060	3.4789	3.677	3.833	3.962	4.072	4.169	4.256	4.334	4.405
9	3.1109	3.3642	3.547	3.690	3.808	3.909	3.997	4.075	4.146	4.210
10	3.0382	3.2769	3.448	3.581	3.691	3.785	3.867	3.939	4.005	4.064
11	2.9809	3.2081	3.370	3.497	3.600	3.689	3.765	3.833	3.895	3.950
12	2.9345	3.1527	3.308	3.428	3.527	3.611	3.684	3.749	3.807	3.859
13	2.8962	3.1070	3.256	3.372	3.467	3.548	3.618	3.679	3.735	3.785
14	2.8640	3.0688	3.214	3.326	3.417	3.495	3.562	3.621	3.675	3.723
15	2.8366	3.0363	3.177	3.286	3.375	3.450	3.515	3.573	3.624	3.670
16	2.8131	3.0083	3.146	3.252	3.339	3.412	3.475	3.531	3.581	3.626
17	2.7925	2.9840	3.119	3.222	3.307	3.378	3.440	3.494	3.543	3.587
18	2.7745	2.9627	3.095	3.197	3.279	3.349	3.410	3.463	3.510	3.553
19	2.7586	2.9439	3.074	3.174	3.255	3.323	3.383	3.435	3.481	3.523
20	2.7444	2.9271	3.055	3.153	3.233	3.301	3.359	3.410	3.455	3.497
21	2.7316	2.9121	3.038	3.135	3.214	3.280	3.337	3.388	3.432	3.473
22	2.7201	2.8985	3.023	3.119	3.196	3.262	3.318	3.368	3.412	3.452
23	2.7097	2.8863	3.009	3.104	3.181	3.245	3.301	3.350	3.393	3.432
24	2.7002	2.8751	2.997	3.091	3.166	3.230	3.285	3.333	3.376	3.415
25	2.6916	2.8649	2.986	3.078	3.153	3.216	3.270	3.318	3.361	3.399
26	2.6836	2.8555	2.975	3.067	3.141	3.204	3.257	3.304	3.346	3.384
27	2.6763	2.8469	2.966	3.057	3.130	3.192	3.245	3.292	3.333	3.371
28	2.6695	2.8389	2.957	3.047	3.120	3.181	3.234	3.280	3.321	3.359
29	2.6632	2.8316	2.949	3.038	3.110	3.171	3.223	3.269	3.310	3.347
30	2.6574	2.8247	2.941	3.030	3.102	3.162	3.214	3.259	3.300	3.336

# Bonferroni Critical values for two-tailed tests with $\alpha = 0.010$

c = the number of comparisons to be made  
df = number of degrees of freedom for the error estimate

df	c:	2	3	4	5	6	7	8	9	10	11
2	14.089	17.277	19.962	22.327	24.464	26.429	28.257	29.974	31.598	33.144	
3	7.453	8.575	9.465	10.215	10.869	11.453	11.984	12.471	12.924	13.347	
4	5.598	6.254	6.758	7.173	7.529	7.841	8.122	8.376	8.610	8.827	
5	4.773	5.247	5.604	5.893	6.138	6.352	6.541	6.713	6.869	7.013	
6	4.317	4.698	4.981	5.208	5.398	5.563	5.709	5.840	5.959	6.068	
7	4.029	4.355	4.595	4.785	4.944	5.082	5.202	5.310	5.408	5.497	
8	3.833	4.122	4.334	4.501	4.640	4.759	4.864	4.957	5.041	5.118	
9	3.690	3.954	4.146	4.297	4.422	4.529	4.622	4.706	4.781	4.849	
10	3.581	3.827	4.005	4.144	4.259	4.357	4.442	4.518	4.587	4.649	
11	3.497	3.728	3.895	4.025	4.132	4.223	4.303	4.373	4.437	4.495	
12	3.428	3.649	3.807	3.930	4.031	4.117	4.192	4.258	4.318	4.372	
13	3.372	3.584	3.735	3.852	3.948	4.030	4.101	4.164	4.221	4.272	
14	3.326	3.530	3.675	3.787	3.880	3.958	4.026	4.086	4.140	4.189	
15	3.286	3.484	3.624	3.733	3.822	3.897	3.963	4.021	4.073	4.120	
16	3.252	3.444	3.581	3.686	3.773	3.846	3.909	3.965	4.015	4.060	
17	3.222	3.410	3.543	3.646	3.730	3.801	3.862	3.917	3.965	4.009	
18	3.197	3.380	3.510	3.611	3.692	3.762	3.822	3.874	3.922	3.964	
19	3.174	3.354	3.481	3.579	3.660	3.727	3.786	3.837	3.883	3.925	
20	3.153	3.331	3.455	3.552	3.630	3.697	3.754	3.804	3.850	3.890	
21	3.135	3.310	3.432	3.527	3.604	3.669	3.726	3.775	3.819	3.859	
22	3.119	3.291	3.412	3.505	3.581	3.645	3.700	3.749	3.792	3.831	
23	3.104	3.274	3.393	3.485	3.560	3.623	3.677	3.725	3.768	3.806	
24	3.091	3.258	3.376	3.467	3.540	3.603	3.656	3.703	3.745	3.783	
25	3.078	3.244	3.361	3.450	3.523	3.584	3.637	3.684	3.725	3.763	
26	3.067	3.231	3.346	3.435	3.507	3.567	3.620	3.666	3.707	3.744	
27	3.057	3.219	3.333	3.421	3.492	3.552	3.604	3.649	3.690	3.726	
28	3.047	3.208	3.321	3.408	3.479	3.538	3.589	3.634	3.674	3.710	
29	3.038	3.198	3.310	3.396	3.466	3.525	3.575	3.620	3.659	3.695	
30	3.030	3.189	3.300	3.385	3.454	3.512	3.563	3.607	3.646	3.681	