

**Table A-3: t distribution: Critical t values**

Degrees of Freedom	Area in One Tail					Degrees of Freedom	Area in One Tail				
	0.005	0.01	0.025	0.05	0.10		0.005	0.01	0.025	0.05	0.10
Degrees of Freedom	Area in Two Tails					Degrees of Freedom	Area in Two Tails				
	0.01	0.02	0.05	0.10	0.20		0.01	0.02	0.05	0.10	0.20
1	63.657	31.821	12.706	6.314	3.078	28	2.763	2.467	2.048	1.701	1.313
2	9.925	6.965	4.303	2.920	1.886	29	2.756	2.462	2.045	1.699	1.311
3	5.841	4.541	3.182	2.353	1.638	30	2.750	2.457	2.042	1.697	1.310
4	4.604	3.747	2.776	2.132	1.533	31	2.744	2.453	2.040	1.696	1.309
5	4.032	3.365	2.571	2.015	1.476	32	2.738	2.449	2.037	1.694	1.309
6	3.707	3.143	2.447	1.943	1.440	33	2.733	2.445	2.035	1.692	1.308
7	3.499	2.998	2.365	1.895	1.415	34	2.728	2.441	2.032	1.691	1.307
8	3.355	2.896	2.306	1.860	1.397	35	2.724	2.438	2.030	1.690	1.306
9	3.250	2.821	2.262	1.833	1.383	36	2.719	2.434	2.028	1.688	1.306
10	3.169	2.764	2.228	1.812	1.372	37	2.715	2.431	2.026	1.687	1.305
11	3.106	2.718	2.201	1.796	1.363	38	2.712	2.429	2.024	1.686	1.304
12	3.055	2.681	2.179	1.782	1.356	39	2.708	2.426	2.023	1.685	1.304
13	3.012	2.650	2.160	1.771	1.350	40	2.704	2.423	2.021	1.684	1.303
14	2.977	2.624	2.145	1.761	1.345	45	2.690	2.412	2.014	1.679	1.301
15	2.947	2.602	2.131	1.753	1.341	50	2.678	2.403	2.009	1.676	1.299
16	2.921	2.583	2.120	1.746	1.337	60	2.660	2.390	2.000	1.671	1.296
17	2.898	2.567	2.110	1.740	1.333	70	2.648	2.381	1.994	1.667	1.294
18	2.878	2.552	2.101	1.734	1.330	80	2.639	2.374	1.990	1.664	1.292
19	2.861	2.539	2.093	1.729	1.328	90	2.632	2.368	1.987	1.662	1.291
20	2.845	2.528	2.086	1.725	1.325	100	2.626	2.364	1.984	1.660	1.290
21	2.831	2.518	2.080	1.721	1.323	200	2.601	2.345	1.972	1.653	1.286
22	2.819	2.508	2.074	1.717	1.321	300	2.592	2.339	1.968	1.650	1.284
23	2.807	2.500	2.069	1.714	1.319	400	2.588	2.336	1.966	1.649	1.284
24	2.797	2.492	2.064	1.711	1.318	500	2.586	2.334	1.965	1.648	1.283
25	2.787	2.485	2.060	1.708	1.316	1000	2.581	2.330	1.962	1.646	1.282
26	2.779	2.479	2.056	1.706	1.315	2000	2.578	2.328	1.961	1.646	1.282
27	2.771	2.473	2.052	1.703	1.314	Large	2.576	2.326	1.960	1.645	1.282
Degrees of Freedom	Area in One Tail					Degrees of Freedom	Area in One Tail				
	0.005	0.01	0.03	0.05	0.10		0.005	0.01	0.03	0.05	0.10
Degrees of Freedom	Area in Two Tails					Degrees of Freedom	Area in Two Tails				
	0.01	0.02	0.05	0.10	0.20		0.01	0.02	0.05	0.10	0.20