

Table A.2 The t Distribution—Values of t Exceeded with Given Probability

df	$P = 0.25$	$P = 0.10$	$P = 0.05$	$P = 0.025$	$P = 0.01$	$P = 0.005$	$P = 0.001$	$P = 0.0005$	df
1	1.0000	3.0777	6.3138	12.706	31.821	63.657	318.31	636.62	1
2	0.8165	1.8856	2.9200	4.3027	6.9646	9.9248	22.327	31.599	2
3	0.7649	1.6377	2.3534	3.1824	4.5407	5.8409	10.215	12.924	3
4	0.7407	1.5332	2.1318	2.7764	3.7469	4.6041	7.1732	8.6103	4
5	0.7267	1.4759	2.0150	2.5706	3.3649	4.0321	5.8934	6.8688	5
6	0.7176	1.4398	1.9432	2.4469	3.1427	3.7074	5.2076	5.9588	6
7	0.7111	1.4149	1.8946	2.3646	2.9980	3.4995	4.7853	5.4079	7
8	0.7064	1.3968	1.8595	2.3060	2.8965	3.3554	4.5008	5.0413	8
9	0.7027	1.3830	1.8331	2.2622	2.8214	3.2498	4.2968	4.7809	9
10	0.6998	1.3722	1.8125	2.2281	2.7638	3.1693	4.1437	4.5869	10
11	0.6974	1.3634	1.7959	2.2010	2.7181	3.1058	4.0247	4.4370	11
12	0.6955	1.3562	1.7823	2.1788	2.6810	3.0545	3.9296	4.3178	12
13	0.6938	1.3502	1.7709	2.1604	2.6503	3.0123	3.8520	4.2208	13
14	0.6924	1.3450	1.7613	2.1448	2.6245	2.9768	3.7874	4.1405	14
15	0.6912	1.3406	1.7531	2.1314	2.6025	2.9467	3.7329	4.0728	15
16	0.6901	1.3368	1.7459	2.1199	2.5835	2.9208	3.6862	4.0150	16
17	0.6892	1.3334	1.7396	2.1098	2.5669	2.8982	3.6458	3.9652	17
18	0.6884	1.3304	1.7341	2.1009	2.5524	2.8784	3.6105	3.9217	18
19	0.6876	1.3277	1.7291	2.0930	2.5395	2.8609	3.5794	3.8834	19
20	0.6870	1.3253	1.7247	2.0860	2.5280	2.8453	3.5518	3.8495	20
21	0.6864	1.3232	1.7207	2.0796	2.5176	2.8314	3.5272	3.8193	21
22	0.6858	1.3212	1.7171	2.0739	2.5083	2.8188	3.5050	3.7922	22
23	0.6853	1.3195	1.7139	2.0687	2.4999	2.8073	3.4850	3.7677	23
24	0.6848	1.3178	1.7109	2.0639	2.4922	2.7969	3.4668	3.7454	24
25	0.6844	1.3163	1.7081	2.0595	2.4851	2.7874	3.4502	3.7252	25
26	0.6840	1.3150	1.7056	2.0555	2.4786	2.7787	3.4350	3.7066	26
27	0.6837	1.3137	1.7033	2.0518	2.4727	2.7707	3.4210	3.6896	27
28	0.6834	1.3125	1.7011	2.0484	2.4671	2.7633	3.4082	3.6739	28
29	0.6830	1.3114	1.6991	2.0452	2.4620	2.7564	3.3963	3.6594	29
30	0.6828	1.3104	1.6973	2.0423	2.4573	2.7500	3.3852	3.6460	30
35	0.6816	1.3062	1.6896	2.0301	2.4377	2.7238	3.3401	3.5912	35
40	0.6807	1.3031	1.6839	2.0211	2.4233	2.7045	3.3069	3.5510	40
45	0.6800	1.3006	1.6794	2.0141	2.4121	2.6896	3.2815	3.5203	45
50	0.6794	1.2987	1.6759	2.0086	2.4033	2.6778	3.2614	3.4960	50
55	0.6790	1.2971	1.6730	2.0040	2.3961	2.6682	3.2452	3.4764	55
60	0.6786	1.2958	1.6706	2.0003	2.3901	2.6603	3.2317	3.4602	60
65	0.6783	1.2947	1.6686	1.9971	2.3851	2.6536	3.2204	3.4466	65
70	0.6780	1.2938	1.6669	1.9944	2.3808	2.6479	3.2108	3.4350	70
75	0.6778	1.2929	1.6654	1.9921	2.3771	2.6430	3.2025	3.4250	75
90	0.6772	1.2910	1.6620	1.9867	2.3685	2.6316	3.1833	3.4019	90
105	0.6768	1.2897	1.6595	1.9828	2.3624	2.6235	3.1697	3.3856	105
120	0.6765	1.2886	1.6577	1.9799	2.3578	2.6174	3.1595	3.3735	120
∞	0.6745	1.2816	1.6449	1.9600	2.3263	2.5758	3.0902	3.2905	∞