TABLE FD.1 Observations on Income and Education, 20 Observations

I = Observation,

Y = Income,

Source: Data are artificial.

APPENDIX G

- 10/0/0F

STATISTICAL TABLES

TAB	LE G.1	Cun	nulative	Normal	Distribut	tion. Tab	le Entry	Is Φ(z)=	Prob[Z <	≤ <i>z</i>]
z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

954 APPENDIX G ♦ Statistical Tables

TABL		centiles of the Prob $[t_n \le x] =$		Distribution. T	able Entry Is a	Such
n	.750	.900	.950	.975	.990	.995
1	1.000	3.078	6.314	12.706	31.821	63.657
	.816	1.886	2.920	4.303	6.965	9.925
2	.765	1.638	2.353	3.182	4.541	5.841
4	.741	1.533	2.132	2.776	3.747	4.604
5	.727	1.476	2.015	2.571	3.365	4.032
6	.718	1.440	1.943	2.447	3.143	3.707
7	.711	1.415	1.895	2.365	2.998	3.499
8	.706	1.397	1.860	2.306	2.896	3.355
9	.703	1.383	1.833	2.262	2.821	3.250
10	.700	1.372	1.812	2.228	2.764	3.169
11	.697	1.363	1.796	2.201	2.718	3.106
12	.695	1.356	1.782	2.179	2.681	3.055
13	.694	1.350	1.771	2.160	2.650	3.012
14	.692	1.345	1.761	2.145	2.624	2.977
15	.691	1.341	1.753	2.131	2.602	2.947
16	.690	1.337	1.746	2.120	2.583	2.921
17	.689	1.333	1.740	2.110	2.567	2.898
18	.688	1.330	1.734	2.101	2.552	2.878
19	.688	1.328	1.729	2.093	2.539	2.861
20	.687	1.325	1.725	2.086	2.528	2.845
21	.686	1.323	1.721	2.080	2.518	2.831
22	.686	1.321	1.717	2.074	2.508	2.819
23	.685	1.319	1.714	2.069	2.500	2.807
24	.685	1.318	1.711	2.064	2.492	2.797
25	.684	1.316	1.708	2.060	2.485	2.787
26	.684	1.315	1.706	2.056	2.479	2.779
27	.684	1.314	1.703	2.052	2.473	2.771
28	.683	1.313	1.701	2.048	2.467	2.763
29	.683	1.311	1.699	2.045	2.462	2.756
30	.683	1.310	1.697	2.042	2.457	2.750
35	.682	1.306	1.690	2.030	2.438	2.724
40	.681	1.303	1.684	2.021	2.423	2.704
45	.680	1.301	1.679	2.014	2.412	2.690
50	.679	1.299	1.676	2.009	2.403	2.678
60	.679	1.296	1.671	2.000	2.390	2.660
70	.678	1.294	1.667	1.994	2.381	2.648
80	.678	1.292	1.664	1.990	2.374	2.639
90	.677	1.291	1.662	1.987	2.368	2.632
100	.677	1.290	1.660	1.984	2.364	2.626
∞	.674	1.282	1.645	1.960	2.326	2.576

TA	BLE (ntiles or rob $[\chi_n^2]$			quared	Distri	bution	. Table	Entry	ls c s	uch
n	.005	.010	.025	.050	.100	.250	.500	.750	.900	.950	.975	.990	.995
1	.00004	.0002	.001	.004	.02	.10	.45	1.32	2.71	3.84	5.02	6.63	7.88
2	.01	.02	.05	.10	.21	.58	1.39	2.77	4.61	5.99	7.38	9.21	10.60
3	.07	.11	.22	.35	.58	1.21	2.37	4.11	6.25	7.81	9.35	11.34	12.84
4	.21	.30	.48	.71	1.06	1.92	3.36	5.39	7.78	9.49	11.14	13.28	14.86
5	.41	.55	.83	1.15	1.61	2.67	4.35	6.63	9.24	11.07	12.83	15.09	16.75
6	.68	.87	1.24	1.64	2.20	3.45	5.35	7.84	10.64	12.59	14.45	16.81	18.55
7	.99	1.24	1.69	2.17	2.83	4.25	6.35	9.04	12.02	14.07	16.01	18.48	20.28
8	1.34	1.65	2.18	2.73	3.49	5.07	7.34	10.22	13.36	15.51	17.53	20.09	21.95
9	1.73	2.09	2.70	3.33	4.17	5.90	8.34	11.39	14.68	16.92	19.02	21.67	23.59
10	2.16	2.56	3.25	3.94	4.87	6.74	9.34	12.55	15.99	18.31	20.48	23.21	25.19
11	2.60	3.05	3.82	4.57	5.58	7.58	10.34	13.70	17.28	19.68	21.92	24.72	26.76
12	3.07	3.57	4.40	5.23	6.30	8.44	11.34	14.85	18.55	21.03	23.34	26.22	28.30
13	3.57	4.11	5.01	5.89	7.04	9.30	12.34	15.98	19.81	22.36	24.74	27.69	29.82
14	4.07	4.66	5.63	6.57	7.79		13.34	17.12	21.06	23.68	26.12	29.14	31.32
15	4.60	5.23	6.26	7.26	8.55	11.04	14.34	18.25	22.31	25.00	27.49	30.58	32.80
16	5.14	5.81	6.91	7.96	9.31	11.91	15.34	19.37	23.54	26.30	28.85	32.00	34.27
17	5.70	6.41	7.56	8.67	10.09	12.79	16.34	20.49	24.77	27.59	30.19	33.41	35.72
18	6.26	7.01	8.23	9.39	10.86	13.68	17.34	21.60	25.99	28.87	31.53	34.81	37.16
19	6.84	7.63	8.91	10.12	11.65	14.56	18.34	22.72	27.20	30.14	32.85	36.19	38.58
20	7.43	8.26	9.59	10.85	12.44	15.45	19.34	23.83	28.41	31.41	34.17		40.00
21	8.03	8.90	10.28	11.59	13.24	16.34	20.34	24.93	29.62	32.67	35.48	38.93	41.40
22	8.64	9.54	10.98	12.34	14.04	17.24	21.34	26.04	30.81	33.92	36.78	40.29	42.80
23	9.26	10.20	11.69	13.09	14.85	18.14	22.34	27.14	32.01	35.17	38.08	41.64	44.18
24	9.89	10.86	12.40	13.85	15.66	19.04	23.34	28.24	33.20	36.42	39.36	42.98	45.56
25	10.52	11.52	13.12	14.61	16.47	19.94	24.34	29.34	34.38	37.65	40.65	44.31	46.93
30	13.79	14.95	16.79	18.49	20.60	24.48	29.34	34.80	40.26	43.77	46.98	50.89	53.67
35	17.19	18.51	20.57	22.47	24.80	29.05	34.34	40.22	46.06	49.80	53.20	57.34	60.27
40	20.71	22.16	24.43	26.51	29.05	33.66	39.34	45.62	51.81	55.76	59.34	63.69	66.77
45	24.31	25.90	28.37	30.61	33.35	38.29	44.34	50.98	57.51	61.66	65.41	69.96	73.17
50	27.99	29.71	32.36	34.76	37.69	42.94	49.33	56.33	63.17	67.50	71.42	76.15	79.49

956 APPENDIX G ♦ Statistical Tables

TABLE G.4 95th Percentiles of the *F* Distribution. Table Entry is *f* such that $Prob[F_{n_1,n_2} \le f] = .95$

(Carrier Street, Carrier Stree		$n_1 = Degrees of Freedom for the Numerator$									
n_2	1	2	3	4	5	6	7	8	9		
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54		
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38		
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81		
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00		
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77		
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10		
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68		
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39		
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18		
10	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02		
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59		
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39		
25	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28		
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21		
40	4.08	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12		
50	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	2.07		
70	3.98	3.13	2.74	2.50	2.35	2.23	2.14	2.07	2.02		
100	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.97		
∞	3.84	3.00	2.60	2.37	2.21	2.10	2.01	1.94	1.88		
				-							
n ₂	10	12	15	20	30	40	50	60	∞		
1	241.88	243.91	245.95	248.01	250.10	251.14	252.20	252.20	254.19		
2	19.40	19.41	19.43	19.45	19.46	19.47	19.48	19.48	19.49		
3	8.79	8.74	8.70	8.66	8.62	8.59	8.57	8.57	8.53		
4	5.96	5.91	5.86	5.80	5.75	5.72	5.69	5.69	5.63		
5	4.74	4.68	4.62	4.56	4.50	4.46	4.43	4.43	4.37		
6	4.06	4.00	3.94	3.87	3.81	3.77	3.74	3.74	3.67		
7	3.64	3.57	3.51	3.44	3.38	3.34	3.30	3.30	3.23		
8	3.35	3.28	3.22	3.15	3.08	3.04	3.01	3.01	2.93		
9	3.14	3.07	3.01	2.94	2.86	2.83	2.79	2.79	2.71		
10	2.98	2.91	2.85	2.77	2.70	2.66	2.62	2.62	2.54		
15	2.54	2.48	2.40	2.33	2.25	2.20	2.16	2.16	2.07		
20	2.35	2.28	2.20	2.12	2.04	1.99	1.95	1.95	1.85		
25	2.24	2.16	2.09	2.01	1.92	1.87	1.82	1.82	1.72		
30	2.16	2.09	2.01	1.93	1.84	1.79	1.74	1.74	1.63		
40	2.08	2.00	1.92	1.84	1.74	1.69	1.64	1.64	1.52		
50	2.03	1.95	1.87	1.78	1.69	1.63	1.58	1.58	1.45		
70	1.97	1.89	1.81	1.72	1.62	1.57	1.50	1.50	1.36		
	1.93	1.85	1.77		1.57			1.45	1.30		
100	1.93	1.85	1.//	1.68	1.57	1.52	1.45	145	1.30		

APPENDIX G ♦ Statistical Tables 957

TABLE G.5 99th Percentiles of the F Distribution. Table Entry is f such that $Prob[F_{n_1,n_2} \le f] = .99$

			$n_1 = 1$	Degrees of	Freedom f	or the Nun	ierator		
n_2	1	2	3	4	5	6	7	8	9
1	4052.18	4999.50	5403.35	5624.58	5763.65	5858.99	5928.36	5981.07	6022.47
2	98.50	99.00	99.17	99.25	99.30	99.33	99.36	99.37	99.39
3	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35
4	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66
5	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16
6	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98
7	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.72
8	11.26	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91
9	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35
10	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94
15	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.89
20	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46
25	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.22
30	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.07
40	7.31	5.18	4.31	3.83	3.51	3.29	3.12	2.99	2.89
50	7.17	5.06	4.20	3.72	3.41	3.19	3.02	2.89	2.78
70	7.01	4.92	4.07	3.60	3.29	3.07	2.91	2.78	2.67
100	6.90	4.82	3.98	3.51	3.21	2.99	2.82	2.69	2.59
∞	6.66	4.63	3.80	3.34	3.04	2.82	2.66	2.53	2.43
n_2	10	12	15	20	30	40	50	60	∞
1	6055.85	6106.32	6157.28	6208.73	6260.65	6286.78	6313.03	6313.03	6362.68
2	99.40	99.42	99.43	99.45	99.47	99.47	99.48	99.48	99.50
3	27.23	27.05	26.87	26.69	26.50	26.41	26.32	26.32	26.14
4	14.55	14.37	14.20	14.02	13.84	13.75	13.65	13.65	13.47
5	10.05	9.89	9.72	9.55	9.38	9.29	9.20	9.20	9.03
6	7.87	7.72	7.56	7.40	7.23	7.14	7.06	7.06	6.89
7	6.62	6.47	6.31	6.16	5.99	5.91	5.82	5.82	5.66
8	5.81	5.67	5.52	5.36	5.20	5.12	5.03	5.03	4.87
9	5.26	5.11	4.96	4.81	4.65	4.57	4.48	4.48	4.32
10	4.85	4.71	4.56	4.41	4.25	4.17	4.08	4.08	3.92
15	3.80	3.67	3.52	3.37	3.21	3.13	3.05	3.05	2.88
20	3.37	3.23	3.09	2.94	2.78	2.69	2.61	2.61	2.43
25	3.13	2.99	2.85	2.70	2.54	2.45	2.36	2.36	2.18
30	2.98	2.84	2.70	2.55	2.39	2.30	2.21	2.21	2.02
				2.55 2.37				2.21 2.02	2.02
30	2.98	2.84	2.70		2.39 2.20 2.10	2.30 2.11 2.01	2.02	2.02	1.82
30 40	2.98 2.80 2.70 2.59	2.84 2.66	2.70 2.52	2.37	2.20	2.11		2.02 1.91	1.82 1.70
30 40 50	2.98 2.80 2.70	2.84 2.66 2.56	2.70 2.52 2.42	2.37 2.27	2.20 2.10	2.11 2.01	2.02 1.91	2.02	1.82