

APPENDIX E Tables

TABLE E.1
Table of Random
Numbers

Row	Column							
	00000 12345	00001 67890	11111 12345	11112 67890	22222 12345	22223 67890	33333 12345	33334 67890
01	49280	88924	35779	00283	81163	07275	89863	02348
02	61870	41657	07468	08612	98083	97349	20775	45091
03	43898	65923	25078	86129	78496	97653	91550	08078
04	62993	93912	30454	84598	56095	20664	12872	64647
05	33850	58555	51438	85507	71865	79488	76783	31708
06	97340	03364	88472	04334	63919	36394	11095	92470
07	70543	29776	10087	10072	55980	64688	68239	20461
08	89382	93809	00796	95945	34101	81277	66090	88872
09	37818	72142	67140	50785	22380	16703	53362	44940
10	60430	22834	14130	96593	23298	56203	92671	15925
11	82975	66158	84731	19436	55790	69229	28661	13675
12	30987	71938	40355	54324	08401	26299	49420	59208
13	55700	24586	93247	32596	11865	63397	44251	43189
14	14756	23997	78643	75912	83832	32768	18928	57070
15	32166	53251	70654	92827	63491	04233	33825	69662
16	23236	73751	31888	81718	06546	83246	47651	04877
17	45794	26926	15130	82455	78305	55058	52551	47182
18	09893	20505	14225	68514	47427	56788	96297	78822
19	54382	74598	91499	14523	68479	27686	46162	83554
20	94750	89923	37089	20048	80336	94598	26940	36858
21	70297	34135	53140	33340	42050	82341	44104	82949
22	85157	47954	32979	26575	57600	40881	12250	73742
23	11100	02340	12860	74697	96644	89439	28707	25815
24	36871	50775	30592	57143	17381	68856	25853	35041
25	23913	48357	63308	16090	51690	54607	72407	55538
26	79348	36085	27973	65157	07456	22255	25626	57054
27	92074	54641	53673	54421	18130	60103	69593	49464
28	06873	21440	75593	41373	49502	17972	82578	16364
29	12478	37622	99659	31065	83613	69889	58869	29571
30	57175	55564	65411	42547	70457	03426	72937	83792
31	91616	11075	80103	07831	59309	13276	26710	73000
32	78025	73539	14621	39044	47450	03197	12787	47709
33	27587	67228	80145	10175	12822	86687	65530	49325
34	16690	20427	04251	64477	73709	73945	92396	68263
35	70183	58065	65489	31833	82093	16747	10386	59293
36	90730	35385	15679	99742	50866	78028	75573	67257
37	10934	93242	13431	24590	02770	48582	00906	58595
38	82462	30166	79613	47416	13389	80268	05085	96666
39	27463	10433	07606	16285	93699	60912	94532	95632
40	02979	52997	09079	92709	90110	47506	53693	49892
41	46888	69929	75233	52507	32097	37594	10067	67327
42	53638	83161	08289	12639	08141	12640	28437	09268
43	82433	61427	17239	89160	19666	08814	37841	12847
44	35766	31672	50082	22795	66948	65581	84393	15890
45	10853	42581	08792	13257	61973	24450	52351	16602
46	20341	27398	72906	63955	17276	10646	74692	48438
47	54458	90542	77563	51839	52901	53355	83281	19177
48	26337	66530	16687	35179	46560	00123	44546	79896
49	34314	23729	85264	05575	96855	23820	11091	79821
50	28603	10708	68933	34189	92166	15181	66628	58599
51	66194	28926	99547	16625	45515	67953	12108	57846
52	78240	43195	24837	32511	70880	22070	52622	61881
53	00833	88000	67299	68215	11274	55624	32991	17436
54	12111	86683	61270	58036	64192	90611	15145	01748
55	47189	99951	05755	03834	43782	90599	40282	51417
56	76396	72486	62423	27618	84184	78922	73561	52818
57	46409	17469	32483	09083	76175	19985	26309	91536

random numbers. Because the frame size (800) is a three-digit number, each assigned code number must also be three digits so that every full-time worker has an equal chance of selection. You assign a code of 001 to the first full-time employee in the population listing, a code of 002 to the second full-time employee in the population listing, and so on, until a code of 800 is assigned to the N th full-time worker in the listing. Because $N = 800$ is the largest possible coded value, you discard all three-digit code sequences greater than 800 (i.e., 801 through 999 and 000).

To select the simple random sample, you choose an arbitrary starting point from the table of random numbers. One method you can use is to close your eyes and strike the table of random numbers with a pencil. Suppose you used this procedure and you selected row 06, column 05 of Table 7.1 (which is extracted from Table E.1) as the starting point. Although you can go in any direction, in this example you read the table from left to right, in sequences of three digits, without skipping.

See Section EG7.1 for ways of using Excel to select this sample.

TABLE 7.1
Using a Table of
Random Numbers

Row	Column							
	00000	00001	11111	11112	22222	22223	33333	33334
	12345	67890	12345	67890	12345	67890	12345	67890
01	49280	88924	35779	00283	81163	07275	89863	02348
02	61870	41657	07468	08612	98083	97349	20775	45091
03	43898	65923	25078	86129	78496	97653	91550	08078
04	62993	93912	30454	84598	56095	20664	12872	64647
05	33850	58555	51438	85507	71865	79488	76783	31708
Begin	06	97340	03364	88472	04334	63919	36394	11095
selection	07	70543	29776	10087	10072	55980	64688	68239
(row 06,	08	89382	93809	00796	95945	34101	81277	66090
column 05)	09	37818	72142	67140	50785	22380	16703	53362
	10	60430	22834	14130	96593	23298	56203	92671
	11	82975	66158	84731	19436	55790	69229	28661
	12	39087	71938	40355	54324	08401	26299	49420
	13	55700	24586	93247	32596	11865	63397	44251
	14	14756	23997	78643	75912	83832	32768	18928
	15	32166	53251	70654	92827	63491	04233	33825
	16	23236	73751	31888	81718	06546	83246	47651
	17	45794	26926	15130	82455	78305	55058	52551
	18	09893	20505	14225	68514	46427	56788	96297
	19	54382	74598	91499	14523	68479	27686	46162
	20	94750	89923	37089	20048	80336	94598	26940
	21	70297	34135	53140	33340	42050	82341	44104
	22	85157	47954	32979	26575	57600	40881	12250
	23	11100	02340	12860	74697	96644	89439	28707
	24	36871	50775	30592	57143	17381	68856	25853
	25	23913	48357	63308	16090	51690	54607	72407
								55538

Source: Data extracted from *The Rand Corporation, A Million Random Digits with 100,000 Normal Deviates* (Glencoe, IL: The Free Press, 1955) and displayed in Table E.1 in Appendix E.

The individual with code number 003 is the first full-time employee in the sample (row 06 and columns 05–07), the second individual has code number 364 (row 06 and columns 08–10), and the third individual has code number 884. Because the highest code for any employee is 800, you discard the number 884. Individuals with code numbers 720, 433, 463, 363, 109, 592, 470, and 705 are selected third through tenth, respectively.

You continue the selection process until you get the required sample size of 40 full-time employees. If any three-digit sequence repeats during the selection process, you discard the repeating sequence because you are sampling without replacement.