

Name: _____

Date: _____

Chapter 4—Designing Studies

4.1—Sampling & Surveys In Class Questions

1) **Apartment Living.** You are planning a report on apartment living in a college town. You decide to select three apartment complexes at random for in-depth interviews with residents.

(a) Explain how you would use a line of Table D to choose an SRS of 3 complexes from the list below. Explain your method clearly enough for a classmate to obtain your results.

① Label Number the 33 complexes from 01 to 33 alphabetically.

② Randomization Go to the random number table, choose a starting point (any line), record 2 digit #'s until you have 3 unique numbers between 01 to 33, ignore repeats, 00, 34-99.

③ Select Sample: Match the 3 #'s to the corresponding complexes.

b) Use line 117 to select the sample. Show how you use each of the digits.

01 Ashley Oaks	10 Chauncey Village	19 Franklin Park	28 Richfield
02 Bay Pointe	11 Country Squire	20 Georgetown	29 Sagamore Ridge
03 Beau Jardin	12 Country View	21 Greenacres	30 Salem Courthouse
04 Bluffs	13 Country Villa	22 Lahr House	31 Village Manor
05 Brandon Place	14 Crestview	23 Mayfair Village	32 Waterford Court
06 Briarwood	15 Del-Lynn	24 Nobb Hill	33 Williamsburg
07 Brownstone	16 Fairington	25 Pemberly Courts	
08 Burberry	17 Fairway Knolls	26 Peppermill	
09 Cambridge	18 Fowler	27 Pheasant Run	

16 Fairington
 32 Waterford Ct
 18 Fowler

117	26167	98732	62183	70632	23417	26185	41448	75532
118	73190	32533	04470	29669	84407	90785	65956	86382
119	95857	07118	87664	92099	58806	66979	98624	84826
120	35476	55972	39421	65850	04266	35435	43742	11937

38 (16) 24 (32) 62 (18)

2) **Sampling Gravestones.** The local genealogical society in Coles County, Illinois, has compiled records on all 55,914 gravestones in cemeteries in the county for the years 1825 to 1985. Historians plan to use these records to learn about African Americans in Coles County's history. They first choose an SRS of 395 records to check their accuracy by visiting the actual gravestones.

(a) Explain how you would use technology or Table D to choose the SRS. Your description should be clear enough for a classmate to obtain your results.

Table: # the gravestones from 00001 to 55,914.

Go to random # table, choose a starting point, record 5 digit #'s until we have 395 unique #'s between 00001 to 55,914, ignoring repeats, 00000, and 55915-99999.....

Technology: # the gravestones from 1 to 55,914.

We will now use the $\text{RandInt}(1, 55914)$ on our calculator to generate 395 unique numbers, ignoring repeats. Then match the #'s to the corresponding gravestones.

(b) Use your method from (a) to choose the first 3 gravestones.

55 660

39 569

54 186