



Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### SAMPLING DATA WORKSHEET #3

1. A grocery store wants to know the average number of items that shoppers purchase in each visit to the store. They decide to count the items in the cart of every twentieth person through the check stand.
  - a. Population:
  - b. Sample:
  - c. Parameter of Interest:
  - d. Type of sampling:
  
2. A team of biologists want to know the average weight of fish in a lake. They decide to drop a net and measure all the fish caught in three different locations in the lake.
  - a. Population:
  - b. Sample:
  - c. Parameter of Interest:
  - d. Type of sampling:
  
3. Describe the type of sampling used in each scenario below.
  - a. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You stand in the cafeteria during your lunch break and ask students if they would be willing to participate in your survey as they walk by.
  
  - b. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You use the rolls from each homeroom class. You put all the names from one class into the bowl and draw two names from the class. You go through each homeroom class, drawing 2 names from each class. You ask those students to respond to a survey about the activities they prefer.
  
  - c. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You get the list of all the homeroom classes and randomly select 5 classes. You go to each of the classes selected and survey all the students in that class.
  
  - d. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You assign each student in the school a number. You randomly select a starting number among the first 10 numbers and then select every tenth student in the list from that point forward.

- e. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You decide to put the name of each student in the school into a big bowl. You draw 100 names and ask those students to respond to a survey about the activities they prefer.
- f. You are in charge of school activities. You want to know what activities students would prefer to participate in during the school year. You make a lot of copies of the survey about the activities that students prefer and you put them on a table outside the cafeteria. Students can choose to take the survey and drop their responses into a big box on the table.
4. A person you know owns a small theater that shows local dramatic productions. She wants to know the average age of the people that buy tickets to see the shows so that she can better select which plays to stage. Explain to the owner why selecting the first 20 people that arrive for the show may not be a representative sample.
5. Referring to the example above, describe a process for selecting a representative sample of the theater patrons. Assume there are 435 patrons and you are to sample 20 of them. Use the random table below to make your selections. Make sure to clearly define your procedure.

<b>73735</b>	<b>45963</b>	<b>78134</b>	<b>63873</b>
<b>02965</b>	<b>58303</b>	<b>90708</b>	<b>20025</b>
<b>98859</b>	<b>23851</b>	<b>27965</b>	<b>62394</b>
<b>33666</b>	<b>62570</b>	<b>64775</b>	<b>78428</b>
<b>81666</b>	<b>26440</b>	<b>20422</b>	<b>05720</b>
<b>15838</b>	<b>47174</b>	<b>76866</b>	<b>14330</b>
<b>89793</b>	<b>34378</b>	<b>08730</b>	<b>56522</b>
<b>78155</b>	<b>22466</b>	<b>81978</b>	<b>57323</b>
<b>16381</b>	<b>66207</b>	<b>11698</b>	<b>99314</b>
<b>75002</b>	<b>80827</b>	<b>53867</b>	<b>37797</b>
<b>99982</b>	<b>27601</b>	<b>62686</b>	<b>44711</b>
<b>84543</b>	<b>87442</b>	<b>50033</b>	<b>14021</b>
<b>77757</b>	<b>54043</b>	<b>46176</b>	<b>42391</b>
<b>80871</b>	<b>32792</b>	<b>87989</b>	<b>72248</b>
<b>30500</b>	<b>28220</b>	<b>12444</b>	<b>71840</b>