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

**Practice**

1. Margo collected 12 carrots in a bag.  She drew 5 carrots out of the bag.  Is this a random sample of the carrots in the bag?

2. Chris put some assorted colored kerchiefs into a box.  He looks into the box and pulls out the blue kerchiefs.  Is this is a random sample of the kerchiefs in the bag?

3. Sue had red and white beans in a jar.  She reached in and pulled out 10 beans, without looking in the jar.  Is this a random sample of beans from the jar?

For questions 4-6, identify the population and the sample from each:

For example: In a class of 20 students, where each student is asked if they have gone to the movies in the past month, you would identify the population as 20 Students, and the sample as 20 students.

4. People aboard a plane who have aisle seats are asked if they travel more than 5000 miles per year.

a. Population:

b. Sample:

5. A team of marketing specialists survey every sixth child entering a park to find out how many rides they plan to go on while playing in the park.

a. Population:

b. Sample:

6. Every 15th adult at the exit door of the grocery store is questioned to find out if the store should increase its hours of operation.

a. Population:

b. Sample:

7. Luke wants to find out where most high school students buy their food for lunch.  He surveys every fourth student he sees in the high school parking lot and asks them where they get food for lunch.  Which would have been an improvement in Luke’s experiment?

a. Survey all of the students in the school.

b. Survey all people in the parking lot.

c. Survey students in the lunch hall.

8. Sue is trying to determine the best location to sell snow cones.  There are 4 locations in the city (on a side street, downtown, near a park and at a school.  Sue observed that many people visit the downtown area and the park.  Sue decided to sell snow cones in the downtown area where she saw the most people gather.  What changes to Sue’s sample would have given her a better understanding of where to sell snow cones?

9. Kerry collected shells from a visit to the ocean in a shoebox.  She takes out a handful of shells from the box.  Is this a random sample of shells in a box?

10. There are four dentists in a city.  Their offices are located in four different parts of the city.  Jake wants to attempt to figure out which dentist has the most patients.  He observed that the Downtown and West Street areas have larger populations.  He concurred that the dentists in those areas must have more patients.  After comparing those two areas, he decided that the West Street dentist had the most patients because the area had more traffic.  What changes to Jakes technique would have given him a better understanding of which doctor had the most patients?

11. Caroline wants to predict which restaurant will have less business during the Christmas season.  There are three restaurants in the city.  Two are on the outskirts of a city and one is in the city.  She knows that two hotels situated on the outskirts are fully booked because one has Christmas show and one has a huge indoor pool.  From this information she inferred that the restaurant in the city will have less business during the Christmas season.  What could Caroline due to improve her experiment?

a. Ask people at the hotels if they like fast food.

b. Survey all people to see which December holiday they celebrate.

c. Look at the past holiday performance of the restaurantBottom of Form

The table gives information about the number of girls in each of four schools.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **School** | **A** | **B** | **C** | **D** | **Total** |
| **Number of Girls** | 126 | 82 | 201 | 52 | 461 |

12. Jenny did a survey of these girls.  She used a stratified sample of exactly 80 girls according to school.  Calculate the number of girls from each school that were in her sample of 80.  Complete the table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **School** | **A** | **B** | **C** | **D** | **Total** |
| **Number of Girls** |  |  |  |  | 80 |