

Lesson 10 Practice Problems

1. The meat department manager at a grocery store is worried some of the packages of ground beef labeled as having one pound of meat may be under-filled. He decides to take a sample of 5 packages from a shipment containing 100 packages of ground beef. The packages were numbered as they were put in the box, so each one has a different number between 1 and 100.

Describe how the manager can select a fair sample of 5 packages.

2. Select **all** the reasons why random samples are preferred over other methods of getting a sample.
 - A. If you select a random sample, you can determine how many people you want in the sample.
 - B. A random sample is always the easiest way to select a sample from a population.
 - C. A random sample is likely to give you a sample that is representative of the population.
 - D. A random sample is a fair way to select a sample, because each person in the population has an equal chance of being selected.
 - E. If you use a random sample, the sample mean will always be the same as the population mean.

3. Jada is using a computer's random number generator to produce 6 random whole numbers between 1 and 100 so she can use a random sample. The computer produces the numbers: 1, 2, 3, 4, 5, and 6. Should she use these numbers or have the computer generate a new set of random numbers? Explain your reasoning.
4. Data collected from a survey of American teenagers aged 13 to 17 was used to estimate that 29% of teens believe in ghosts. This estimate was based on data from 510 American teenagers. What is the population that people carrying out the survey were interested in?
- A. All people in the United States.
 - B. The 510 teens that were surveyed.
 - C. All American teens who are between the ages of 13 and 17.
 - D. The 29% of the teens surveyed who said they believe in ghosts.

(From Unit 8, Lesson 8.)