### 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.

1. Select **all** the reasons why random samples are preferred over other methods of getting a sample.
   1. If you select a random sample, you can determine how many people you want in the sample.
   2. A random sample is always the easiest way to select a sample from a population.
   3. A random sample is likely to give you a sample that is representative of the population.
   4. A random sample is a fair way to select a sample, because each person in the population has an equal chance of being selected.
   5. If you use a random sample, the sample mean will always be the same as the population mean.
2. 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.
3. 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?
   1. All people in the United States.
   2. The 510 teens that were surveyed.
   3. All American teens who are between the ages of 13 and 17.
   4. The 29% of the teens surveyed who said they believe in ghosts.

* (From Unit 8, Lesson 8.)



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