Statistics and Data

Long-Term Memory Review
Review 1

1. Choose from the words below to complete the sentence: When collecting data using a survey, you can choose to ask everyone in your target group, which is called a census, or you can choose a _____, which is interviewing a select few.

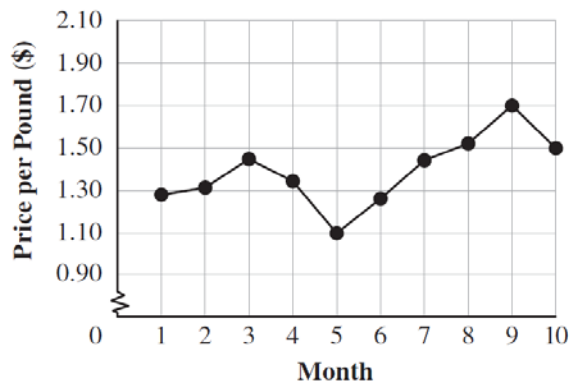   population   test   sample   frequency   statistic

2. True or False – When choosing an appropriate selection of people to represent everyone in the entire group, you should choose them using bias.

3. The student council needs to determine which color T-shirt to sell. They survey students who have a first period English class. Is this an example of a sample or a census?

4. The graph below shows the price of one pound of a certain type of metal. The points on the graph represent the price of the metal on the first day of each month.

Price of Metal

Based on the graph, which month showed the greatest change in the price of the metal?

Statistics and Data

Long-Term Memory Review
Review 2

1. Using a _____ is a way to collect data from a group of people by polling everyone in the group.

2. A restaurant is considering changing its specialty from Italian food to Mexican food. The owner asks the current patrons to give their opinion on the change. Would this survey be biased? Why or why not?

3. A television station wants to know their viewers' opinions about whether or not they should change the time of their evening news. Should they use a sample or a census? Explain

4. Use the chart below, which shows the number of students who purchased a school lunch each day of the week for three weeks.

School Lunches

	Mon.	Tue.	Wed.	Thur.	Fri.
Week 1	425	400	476	500	478
Week 2	501	478	404	456	493
Week 3	417	485	515	468	475

Create a bar graph that represents the greatest number of students who purchased a school lunch each day of the week for the three weeks.

Statistics and Data

Long-Term Memory Review
<u>Review 3</u>

1. When surveying a population, if you cannot survey everyone in the population, you should use a _____.

2. The Algebra II Honors teacher at a high school surveyed her classes and asked them how much they liked math, on a scale of 1 to 10. The mean of her students' responses was an 8. From this survey, can the school conclude that all math students like math? Explain.

3. A realtor surveyed all of his clients in order to obtain a satisfaction rating. Is this an example of a sample or a census?

4. The table below shows the quantities of various types of pets, by gender, sold at a pet store during a one-week period.

    Weekly Pet Sales

	Male	Female
Dogs	6	2
Cats	5	7
Birds	3	1
Snakes	0	2

    Which type of graph would best describe the sales information given in the table?

    scatter plot   line graph   bar graph   frequency plot
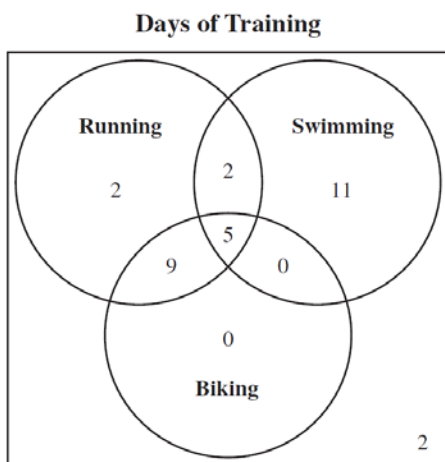
    Sketch the graph of your choosing below.

Statistics and Data

Long-Term Memory Review
Review 4

1. Define a census.

2. A high school principal wants to determine the average amount of time that all students at the high school spend riding school buses each day. Which group of students could be surveyed to get the **least** biased sample?

   A   students at the bike rack in the afternoon

   B   students who do not have a driver's license

   C   students on every sixth bus that arrives at school

   D   students in one social studies class from each grade

3. A radio station wants to know if they should hire a new deejay for their morning show. The station surveys everyone who calls in to their morning show. Is this an example of a sample or a census?

4. Bart is training for a race in which he will run, swim, and bike. The Venn diagram below shows the number of days in July that Bart trained for each part of the race.

Days of Training

Based on the Venn diagram, which two events did Bart always do together on the same days?
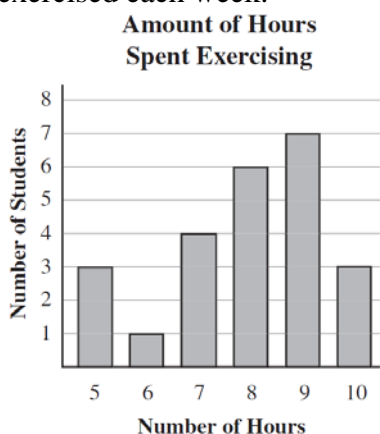
Statistics and Data

Long-Term Memory Review
Quiz

1. What is the difference between a sample and a census?

2. A student's statistics project involves surveying the parents of high school students to find out how many of them regularly attend school activities. The student chooses a sample of parents at a high school band concert. Is this sample biased? Why or why not?

3. Two students did surveys for a class project. Descriptions of their surveys are listed below.

   - Raphael wanted to know where his classmates were born. Each student in the class was asked to give his birthplace.
   - Anne wanted to know about the recycling program at school. Twenty freshmen, twenty sophomores, twenty juniors, and twenty seniors were randomly selected and asked their opinions about recycling.

   Which statement is correct?

   A. Raphael took a sample and Anne did a census.

   B. Raphael did a census and Anne took a sample.

   C. Both students took a sample.

   D. Both students did a census.

4. The graph below shows the results of a survey in which students were asked how many hours they exercised each week.

Amount of Hours Spent Exercising

Create a frequency table for the information in the bar graph. What is the **median** number of hours that students' exercised?
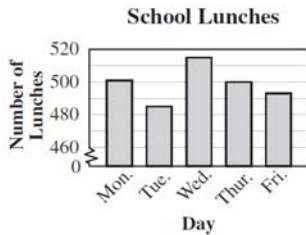
Statistics and Data

Long-Term Memory Review
ANSWERS

Review 1 – Answers
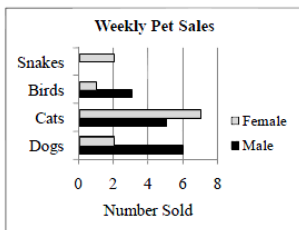
1. sample   2. false   3. sample   4. month 4

Review 2 Answers

1. census
2. yes; customers at the restaurant are more likely to prefer what the restaurant currently serves
3. sample; a census is impossible because they don't know who **all** of their viewers are
4.

Review 3 Answers

1. sample
2. No – this is a biased sample
3. census
4. bar graph

Review 4 Answers

1. A survey of everyone in a given population
2. D
3. sample
4. running and biking

Quiz – Answers

1. A sample is a survey of a collection of a select group of people from a population. A census is a survey of all people in a population.
2. yes; parents that are at a game are ones that most likely regularly attend school activities
3. B
4.

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 5 ||||
 6 |
 7 ||||
 8 |||| |
 9 |||| ||
10 ||||
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median = 8