Chapter 7 Vocabulary Check

Fill in each blank with one of the words or phrases listed below.

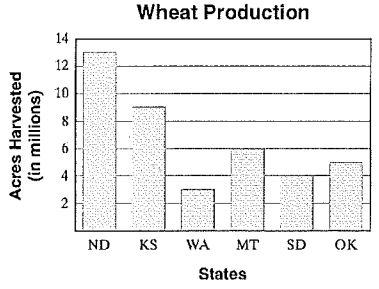
outcomes	bar	experiment	mean	tree diagram
pictograph	line	class interval	median	probability
histogram	circle	class frequency	mode	

1. A(n) _____ graph presents data using vertical or horizontal bars.
2. The _____ of a set of number items is $\frac{\text{sum of items}}{\text{number of items}}$.
3. The possible results of an experiment are the _____.
4. A(n) _____ is a graph in which pictures or symbols are used to visually present data.
5. The _____ of a set of numbers is the number that occurs most often.
6. A(n) _____ graph displays information with a line that connects data points.
7. The _____ of an ordered set of numbers is the middle number.
8. A(n) _____ is one way to picture and count outcomes.
9. A(n) _____ is an activity being considered, such as tossing a coin or rolling a die.
10. In a(n) _____ graph, each section (shaped like a piece of pie) shows a category and the relative size of the category.
11. The _____ of an event is $\frac{\text{number of ways that the event can occur}}{\text{number of possible outcomes}}$.
12. A(n) _____ is a special bar graph in which the width of each bar represents a(n) _____ and the height of each bar represents the _____.

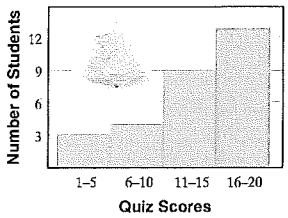
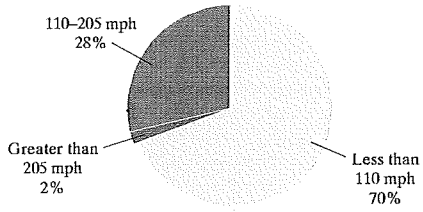
Helpful Hint

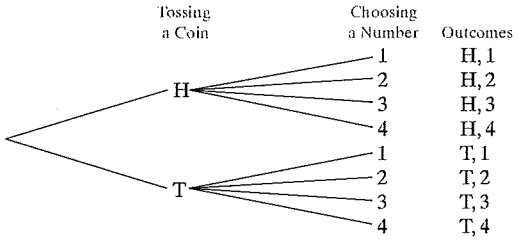
Are you preparing for your test? Don't forget to take the Chapter 7 Test on page 539. Then check your answers at the back of your text and use the Chapter Test Prep Videos to see the fully worked-out solutions to any of the exercises you want to review.

7 Chapter Highlights

Definitions and Concepts	Examples
Section 7.1 Reading Pictographs, Bar Graphs, Histograms, and Line Graphs	
A **pictograph** is a graph in which pictures or symbols are used to visually present data. A **line graph** displays information with a line that connects data points. A **bar graph** presents data using vertical or horizontal bars. The bar graph on the right shows the number of acres of wheat harvested in 1996 for leading states.	 *Source:* U.S. Department of Agriculture **1.** Approximately how many acres of wheat were harvested in Kansas? 9,000,000 acres

(*continued*)

Definitions and Concepts	Examples
Section 7.1 Reading Pictographs, Bar Graphs, Histograms, and Line Graphs (*continued*)	
	2. About how many more acres of wheat were harvested in North Dakota than South Dakota? 13 million − 4 million 9 million or 9,000,000 acres
A **histogram** is a special bar graph in which the width of each bar represents a **class interval** and the height of each bar represents the **class frequency.** The histogram on the right shows student quiz scores.	 **1.** How many students received a score of 6–10? 4 students **2.** How many students received a score of 11–20? 9 + 13 = 22 students
Section 7.2 Reading Circle Graphs	
In a **circle graph,** each section (shaped like a piece of pie) shows a category and the relative size of the category. The circle graph on the right classifies tornadoes by wind speed.	**Tornado Wind Speeds**  *Source:* National Oceanic and Atmospheric Administration **1.** What percent of tornadoes have wind speeds of 110 mph or greater? 28% + 2% = 30% **2.** If there were 1235 tornadoes in the United States in 1995, how many of these might we expect to have had wind speeds less than 110 mph? Find 70% of 1235. 70%(1235) = 0.70(1235) = 864.5 ≈ 865 Around 865 tornadoes would be expected to have had wind speeds of less than 110 mph.

Definitions and Concepts	Examples
Section 7.3 Mean, Median, and Mode	
The **mean** (or **average**) of a set of number items is $\text{mean} = \frac{\text{sum of items}}{\text{number of items}}$ The **median** of a set of numbers in numerical order is the middle number. If the number of items is even, the median is the mean of the two middle numbers. The **mode** of a set of numbers is the number that occurs most often. (A set of numbers may have no mode or more than one mode.)	Find the mean, median, and mode of the following set of numbers: 33, 35, 35, 43, 68, 68 $\text{mean} = \frac{33 + 35 + 35 + 43 + 68 + 68}{6} = 47$ The median is the mean of the two middle numbers, 35 and 43 $\text{median} = \frac{35 + 43}{2} = 39$ There are two modes because there are two numbers that occur twice: 35 and 68
Section 7.4 Counting and Introduction to Probability	
An **experiment** is an activity being considered, such as tossing a coin or rolling a die. The possible results of an experiment are the **outcomes.** A **tree diagram** is one way to picture and count outcomes.	Draw a tree diagram for tossing a coin and then choosing a number from 1 to 4. 
Any number of outcomes considered together is called an **event.** The **probability** of an event is a measure of the chance or likelihood of it occurring. $\text{probability of an event} = \frac{\text{number of ways that the event can occur}}{\text{number of possible outcomes}}$	Find the probability of tossing a coin twice and tails occurring each time. 1 way the event can occur HH, HT, TH, TT 4 possible outcomes $\text{probability} = \frac{1}{4}$