## **Practice 4-5**

Applying Ratios to Probability

A driver collected data on how long it takes to drive to work.

Time in minutes	20	25	30
Number of trips	4	8	2

- **1.** Find P(the trip will take 25 min).
- 2. Find P(the trip will take 20 min).
- 3. Find P(the trip will take at least 25 min).

Use the data in the line plot to find each probability.

JAN	FEB	MAR	APR	M:AY	JUN	JUL	<b>AUG</b>	SEP	OCT	NOV	DEC
X	X	X	X		X	X	X	X	X	X	X
X		X			X	X	. *	X	· <b>X</b>		X
X	•	X			X		, ,		X		X
					X						X
				Sti	ident Bi	rth Mon	ths				

**4.** P(June)

5. P(October)

**6.** P(first six months of year)

7. P(May)

- **8.** *P*(not December)
- **9.** P(last three months of year)

A cereal manufacturer selects 100 boxes of cereal at random. Ninety-nine of the boxes are the correct weight. Find each probability.

- **10.** P(the cereal box is the correct weight)
- **11.** P(the cereal box is not the correct weight)
- 12. There are 24,000 boxes of cereal. Predict how many of the boxes are the correct weight.
- 13. One letter is chosen at random from the word ALGEBRA. Find each probability.
  - **a.** P(the letter is A)

**b.** P(the letter is a vowel)

- 14. Patrice has a 40% chance of making a free throw. What is the probability that she will miss the free throw?
- 15. A box of animal crackers contains five hippos, two lions, three zebras, and four elephants. Find the probability if one animal cracker is chosen at random.
  - **a.** P(a hippo)

**b.** P(not an elephant)

- **c.** P(an elephant or a lion)
- 16. Anthony is making a collage for his art class by picking shapes randomly. He has five squares, two triangles, two ovals, and four circles. Find each probability.
  - a. P(circle is chosen first)

- **b.** P(a square is not chosen first)
- **c.** P(a triangle or a square is chosen first)

All rights reserved