

## LESSON

5-4

**Making Predictions with Experimental Probability****Reteach**

When you have information about previous events, you can use that information to predict what will happen in the future.

If you can throw a basketball into the basket 3 out of 5 times, you can predict you will make 6 baskets in 10 tries. If you try 15 times, you can expect to make 9 baskets. You can use a proportion or multiply to make predictions.

**A. Use a proportion.**

A survey found that 8 of 10 people chose apples as their favorite fruit. If you ask 100 people, how many can you predict will choose apples as their favorite fruit?

$$\frac{8}{10} = \frac{x}{100}$$

Write a proportion.  
*8 out of 10 is how many out of 100?*

$$\frac{8}{10} = \frac{x}{100}$$

$\underbrace{\hspace{2em}}_{\times 10}$

Since 10 times 10 is 100, multiply 8 times 10 to find the value of  $x$ .

$$x = 80$$

You can predict that 80 of the people will choose apples as their favorite fruit.

**B. Multiply.**

Eric's baseball coach calculated that Eric hits the ball 49 percent of the time. If Eric receives 300 pitches this season, how many times can Eric predict that he will hit the ball?

$$0.49 \times 300 = x$$

$$147 = x$$

Eric can predict that he will hit the ball 147 times.

**Solve.**

- On average, 25 percent of the dogs who go to ABC Veterinarian need a rabies booster. If 120 dogs visit ABC Veterinarian, how many of them will likely need a rabies booster?

Set up a proportion:  $\frac{\quad}{100} = \frac{x}{\quad}$

Solve for  $x$ :  $x = \underline{\hspace{2em}}$

$\underline{\hspace{2em}}$  dogs will likely need a rabies booster.

- About 90 percent of seventh graders prefer texting to emailing. In a sample of 550 seventh graders, how many do you predict will prefer texting?

$$0.9 \times 550 = \underline{\hspace{2em}}$$

$\underline{\hspace{2em}}$  seventh graders will likely prefer texting.