

Name \_\_\_\_\_

### Problem Solving • Find Unknown Lengths

## PROBLEM SOLVING Lesson 7.10

COMMON CORE STANDARD CC.5.NF.5b

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

1. Kamal's bedroom has an area of 120 square feet. The width of the room is  $\frac{5}{6}$  the length of the room. What are the dimensions of Kamal's bedroom?

**Guess:**  $6 \times 20 = 120$

**Check:**  $\frac{5}{6} \times 20 = 16\frac{2}{3}$ ; try a longer width.

**Guess:**  $10 \times 12 = 120$

**Check:**  $\frac{5}{6} \times 12 = 10$ . Correct!

**10 feet by 12 feet**

2. Marisol is painting on a piece of canvas that has an area of 180 square inches. The length of the painting is  $1\frac{1}{4}$  times the width. What are the dimensions of the painting?

3. A small plane is flying a banner in the shape of a rectangle. The area of the banner is 144 square feet. The width of the banner is  $\frac{1}{4}$  the length of the banner. What are the dimensions of the banner?

4. An artificial lake is in the shape of a rectangle and has an area of  $\frac{9}{20}$  square mile. The width of the lake is  $\frac{1}{5}$  the length of the lake. What are the dimensions of the lake?

### Lesson Check (CC.5.NF.5b)

- Consuelo's living room is in the shape of a rectangle and has an area of 360 square feet. The width of the living room is  $\frac{5}{8}$  its length. What is the length of the living room?
  - 15 feet
  - 18 feet
  - 20 feet
  - 24 feet
- A rectangular park has an area of  $\frac{2}{3}$  square mile. The length of the park is  $2\frac{2}{3}$  the width of the park. What is the width of the park?
  - $\frac{1}{2}$  mile
  - $\frac{2}{3}$  mile
  - $1\frac{1}{3}$  miles
  - 2 miles

### Spiral Review (CC.5.NBT.4, CC.5.NF.1, CC.5.NF.4a, CC.5.NF.5a, CC.5.NF.5b)

- Debra babysits for  $3\frac{1}{2}$  hours on Friday and  $1\frac{1}{2}$  times as long on Saturday. Which statement below is true? (Lesson 7.8)
  - Debra babysat more hours on Friday than on Saturday.
  - Debra babysat the same number of hours on Friday and Saturday.
  - Debra babysat 3 times as many hours on Friday than on Saturday.
  - Debra babysat more hours on Saturday than on Friday.
- Leah bought  $4\frac{1}{2}$  pounds of grapes. Of the grapes she bought,  $1\frac{7}{8}$  pounds were red grapes. The rest were green grapes. How many pounds of green grapes did Leah buy? (Lesson 6.7)
  - $2\frac{3}{8}$  pounds
  - $2\frac{5}{8}$  pounds
  - $3\frac{3}{8}$  pounds
  - $3\frac{5}{8}$  pounds
- Tory practiced her basketball shots for  $\frac{2}{3}$  hour. Tim practiced his basketball shots  $\frac{3}{4}$  as much time as Tory did. How long did Tim practice his basketball shots? (Lesson 7.6)
  - $\frac{1}{2}$  hour
  - $\frac{1}{3}$  hour
  - $\frac{1}{4}$  hour
  - $\frac{1}{6}$  hour
- To which place value is the following number rounded? (Lesson 3.4)
 

5.927 to 5.93

  - ones
  - tenths
  - hundredths
  - thousandths