Name _____ Date _____

Dividing Fractions by Fractions: How Many Groups Fit?

Directions: Each fraction inside a division or multiplication problem is written in parentheses here, like (2/3), so you can see that it is one number. Ask what each division means: how many groups of the second number fit into the first. All of the numbers here are greater than 0.

1. How many eighths are in 3/4?

(3/4) ÷ (1/8)

_____

2. Which story can be solved with (2/3) ÷ (2/9)?

A. A string is 2/3 yard long. Tara uses 2/9 yard of it. How much string is left?

B. A string is 2/3 yard long. How many pieces that are each 2/9 yard long can be cut from it?

C. A string is 2/3 yard long. Tara uses 2/9 of the string. How long is the piece she uses?

3. Two students find (2/5) ÷ (3/10).

• Wren flips the first fraction and multiplies: (5/2) × (3/10) = 15/20, which is 3/4.
• Tobias flips the second fraction and multiplies: (2/5) × (10/3) = 20/15, which is 1 1/3.

Whose quotient is right, and why?

A. Wren's, because the first fraction is the one that gets flipped.

B. Tobias's, because dividing by 3/10 is the same as multiplying by its reciprocal, 10/3.

C. Both, because 3/4 and 1 1/3 are equal.

D. Neither, because the quotient is 6/50.

4. Find the quotient. Type it as a fraction in simplest form, such as 4/9.

(1/3) ÷ (5/6) = _____

5. Which quotient is greater than 1? You do not need to divide.

A. (3/4) ÷ (1/3) B. (1/4) ÷ (1/4) C. (2/5) ÷ (1/2) D. (1/3) ÷ (3/4)

6. A quotient times the divisor gives back the number that was divided. Which equation is true and shows that (3/8) ÷ (3/4) = 1/2?

A. (3/8) × (3/4) = 1/2 B. (1/2) × (3/4) = 3/8 C. (1/2) × (3/8) = 3/4

7. A hiker has walked 7/8 mile. One lap of the pond trail is 1/4 mile. How many laps has the hiker walked?

A. 1 1/8 laps B. 3 1/2 laps C. 2/7 lap D. 7/32 lap

8. A baker has 3/4 pound of dough. Each roll uses 3/16 pound of dough. How many rolls can the baker make?

_____ rolls

9. Which expressions are equal to (5/9) ÷ (2/3)? Select the two with the same value as the quotient.

☐ A. (9/5) × (2/3) ☐ B. (9/5) × (3/2) ☐ C. 5/6

☐ D. (5/9) × (2/3) ☐ E. (5/9) × (3/2)

10. A rectangular park has an area of 1/4 square mile. It is 2/3 mile long. How wide is the park? Type a fraction in simplest form, with a slash, as in 4/7.

The park is _____ mile wide.