Name _____ Date _____

Dividing Unit Fractions and Whole Numbers: Share a Piece, Count the Pieces

Directions: When a fraction is part of a division or multiplication expression here, it is written inside parentheses, like (1/4), to show that it is one number. Ask yourself what the division means: sharing one piece equally, or counting how many small pieces fit.

1. How many halves are in 3?

$3 \div (1/2)$

_____

2. Divide. Type the quotient as a fraction in simplest form, like 1/7.

$(1/2) \div 5 =$ _____

3. Which story matches $(1/4) \div 3$?

A. A cook cuts 3 pizzas into fourths.

B. Three friends share 1/4 of a pizza equally.

C. Three friends each eat 1/4 of a pizza.

4. Division can be checked with multiplication. Which equation is true and shows that $5 \div (1/3) = 15$?

A. $15 \times (1/3) = 5$ B. $15 \times 3 = 5$ C. $5 \times (1/3) = 15$

5. Two students find $6 \div (1/3)$.

- Mason divides 6 by 3 and gets 2.
- Leilani says each whole has 3 thirds, so she multiplies 6×3 and gets 18.

Which student has the right quotient, and why?

A. Leilani, because 18 thirds make 6 wholes: $18 \times (1/3) = 6$.

B. Mason, because dividing always gives a number smaller than the number you start with.

C. Neither, because $6 \div (1/3)$ is 1/18.

6. A rope is 5 yards long. It is cut into pieces that are each 1/4 yard long, with no rope left over. How many pieces are there?

_____ pieces

7. Two hikers share 1/3 pound of trail mix equally. How much trail mix does each hiker get? Type a fraction in simplest form, with a slash, as in 1/9.

Each hiker gets _____ pound of trail mix.

8. The numbers 2 and 1/6 can be divided in two orders. Which statement about 2 ÷ (1/6) and (1/6) ÷ 2 is true?

A. Both quotients are 1/3.

B. 2 ÷ (1/6) is 12, and (1/6) ÷ 2 is 1/12.

C. 2 ÷ (1/6) is 1/12, and (1/6) ÷ 2 is 12.

D. Both quotients are 12, because the order does not matter in division.

9. Which expressions are equal to 8? Select the two that equal 8.

☐ A. (1/2) ÷ 4 ☐ B. (1/4) ÷ 2 ☐ C. 2 ÷ (1/4)

☐ D. 8 ÷ (1/8) ☐ E. 4 ÷ (1/2)

10. A jug has 2 gallons of lemonade. Each glass gets 1/8 gallon. After 9 glasses are poured, how many more glasses can be poured from the jug?

_____ glasses