



6th Online Learning #1 MATH

Subject: Mathematics

State: Ohio

Student Name:_____

Teacher Name:_____

School Name:_____

1 Solve each problem using pictures and a number sentence involving division.

(a) How many fives are in 15?

(b) How many halves are in 3?

(c) How many sixths are in 4?

(d) How many two-thirds are in 2?

(e) How many three-fourths are in 2?

(f) How many $\frac{1}{6}$'s are in $\frac{1}{3}$?

(g) How many $\frac{1}{6}$'s are in $\frac{2}{3}$?

(h) How many $\frac{1}{4}$'s are in $\frac{2}{3}$?

(i) How many $\frac{5}{12}$'s are in $\frac{1}{2}$?

2 It requires $\frac{1}{4}$ of a credit to play a video game for one minute.

(a) Emma has $\frac{7}{8}$ credit. Can she play for more or less than one minute? Explain how you know.

(b) How long can Emma play the video game with her $\frac{7}{8}$ credit?

3 You are stuck in a big traffic jam on the freeway and you are wondering how long it will take to get to the next exit, which is $1\frac{1}{2}$ miles away. You are timing your progress and find that you can travel $\frac{2}{3}$ of a mile in one hour. If you continue to make progress at this rate, how long will it be until you reach the exit? Solve the problem with a diagram and explain your answer.

4 The distance between Rosa's house and her school is $\frac{3}{4}$ mile. She ran $\frac{1}{4}$ mile. What fraction of the way to school did she run?

(A) $\frac{1}{3}$ of the way

(B) $\frac{1}{2}$ of the way

(C) $\frac{2}{3}$ of the way

(D) $\frac{3}{4}$ of the way

5 Alisa had $\frac{1}{2}$ liter of juice in a bottle. She drank $\frac{3}{8}$ liters of juice. What fraction of the juice in the bottle did Alisa drink?

(A) $\frac{1}{8}$

(B) $\frac{3}{4}$

(C) $\frac{7}{8}$

(D) $\frac{4}{3}$

6 Rosa ran $\frac{1}{3}$ of the way from her home to school. She ran $\frac{1}{4}$ mile. How far is it between her home and school?

(A) $\frac{1}{12}$ mile

(B) $\frac{3}{4}$ mile

(C) $\frac{4}{3}$ mile

(D) 12 miles

7 A baker used 12 cups of batter to make muffins. It took $\frac{2}{3}$ cup of batter to make 1 muffin. How many muffins did the baker make?

- (A) 6 muffins
- (B) 8 muffins
- (C) 18 muffins
- (D) 36 muffins

8 Which of the following is equivalent to the expression below?

$$2\frac{1}{2} \div \frac{1}{4}$$

(A) $1\frac{3}{5}$

(B) $2\frac{1}{8}$

(C) 4

(D) 10

- 9 A carton of ice cream holds $8\frac{3}{4}$ cups of ice cream. One serving of ice cream is $1\frac{2}{3}$ cups.

Which expression represents how many servings of ice cream are in the carton?

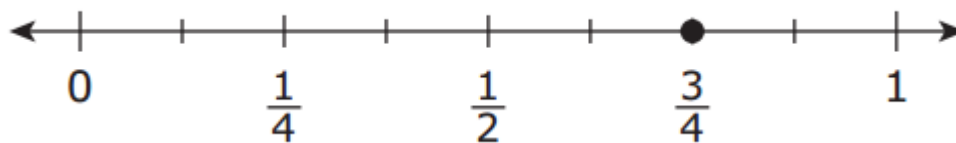
(A) $8\frac{3}{4} + 1\frac{2}{3}$

(B) $8\frac{3}{4} - 1\frac{2}{3}$

(C) $8\frac{3}{4} \times 1\frac{2}{3}$

(D) $8\frac{3}{4} \div 1\frac{2}{3}$

- 10 This diagram shows a number line.



James has a board that is $\frac{3}{4}$ foot long. He wants to cut the board into pieces that are each $\frac{1}{8}$ foot long.

How many pieces can James cut from the board? Explain how James can use the number line diagram to determine the number of pieces he can cut from the board.

- 11 A can contains $\frac{15}{16}$ pound of vegetables. One serving of these vegetables weighs $\frac{1}{4}$ pound.

What is the total number of servings of vegetables in the can?

- (A) $\frac{15}{64}$ serving
- (B) $\frac{4}{15}$ serving
- (C) $1\frac{3}{16}$ serving
- (D) $3\frac{3}{4}$ serving

- 12 A recipe requires $\frac{1}{2}$ cup of flour for every batch of cookies. How many full batches of cookies can be made with $5\frac{1}{2}$ cups of flour?

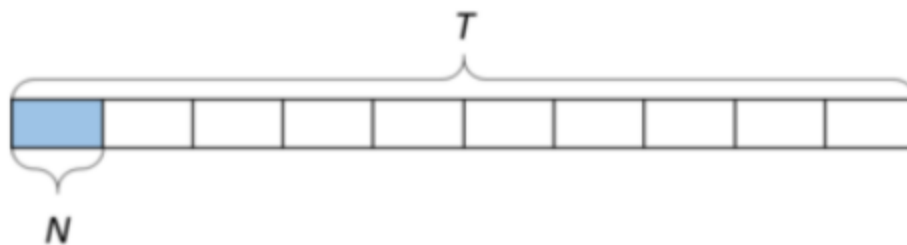
13 A worker at a frozen yogurt store has $2\frac{3}{4}$ cups of frozen yogurt to give to customers as samples. The worker places $\frac{1}{16}$ cup of frozen yogurt in each sample. How many samples can the worker give using all the frozen yogurt?

Write your answer in the space provided.

14 A small jar of salsa contains $12\frac{1}{2}$ ounces. A large jar of salsa contains 75 ounces.

How many small jars of salsa equal the same number of ounces as 1 large jar of salsa?

15 Telula has 10 times as much iced tea as Nikki. We can represent this with a diagram:



or a multiplication equation:

$$T = N \times 10$$

We can also see in the diagram that that Nikki has times as much iced tea as Telula.

We can represent this with a multiplication equation as well:

$$N = T \times \frac{1}{10}$$

Consider the following three pairs of sentences for the questions below:

A nickel is worth $\frac{1}{5}$ times as much as a quarter; $n = q \times \frac{1}{5}$.

A quarter is worth _____ as much as a nickel; _____.

Hilo's pig $\frac{2}{3}$ weighs times as much as Hilo's dog; $P = D \times \frac{2}{3}$.

Hilo's dog weighs _____ as much as Hilo's pig; _____.

Henry ate $\frac{5}{3}$ times as much ice cream as Cecil; $H = C \times \frac{5}{3}$.

Cecil ate _____ as much ice cream as Henry; _____.

a. For the first sentence of each pair, draw a picture that represents the sentence and equation.

b. For the second sentence of each pair, fill in the blank and write a multiplication equation.

In the original problem above, we could write as $T = N \times 10$ as $N = T \div 10$.

c. Rewrite each of the original equations as a division equation in the second column.

d. Rewrite your equation in the third column using multiplication (look at the sample row).

Original Equation Dividing Multiplying

$$T = N \times 10 \quad N = T \div 10 \quad N = T \times \frac{1}{10}$$

$$n = q \times \frac{1}{5}$$

$$P = D \times \frac{2}{3}$$

$$H = C \times \frac{5}{3}$$

e. Describe a pattern you can see with the Dividing and Multiplying equations.