



Represent Division of Whole Numbers by Unit Fractions

Let's solve problems by dividing a whole number by a unit fraction.

Warm-up

Number Talk: Increasing Quotients

Find the value of each expression mentally.

- $6 \div 1$

- $6 \div \frac{1}{2}$

- $6 \div \frac{1}{3}$

- $6 \div \frac{1}{6}$



Activity 1

Notice Patterns

Set A: Find the value that makes each equation true. Draw a diagram if it is helpful. What patterns do you notice?

• $3 \div \frac{1}{4} = \underline{\hspace{2cm}}$

• $4 \div \frac{1}{4} = \underline{\hspace{2cm}}$

• $5 \div \frac{1}{4} = \underline{\hspace{2cm}}$

• $6 \div \frac{1}{4} = \underline{\hspace{2cm}}$

Set B: Find the value that makes each equation true. Draw a diagram if it is helpful. What patterns do you notice?

• $3 \div \frac{1}{2} = \underline{\hspace{2cm}}$

• $3 \div \frac{1}{3} = \underline{\hspace{2cm}}$

• $3 \div \frac{1}{4} = \underline{\hspace{2cm}}$

• $3 \div \frac{1}{5} = \underline{\hspace{2cm}}$

How are problem sets A and B alike? How are they different?

Activity 2

Match the Situation to the Expression

1. Match each problem to an expression that represents the problem. Not all expressions have a match.

- a. One serving of popcorn is $\frac{1}{4}$ cup of kernels.
There are 3 cups of kernels in the bowl. How many servings are in the bowl?



- b. One serving of orange juice is $\frac{1}{4}$ liter. The container of juice holds 2 liters. How many servings are in the container?
- c. One serving of granola is $\frac{1}{2}$ cup. The bag of granola holds 5 cups. How many servings are in the bag?

$$\frac{1}{4} \div 3$$

$$\frac{1}{2} \div 5$$

$$3 \div \frac{1}{4}$$

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

$$5 \div \frac{1}{2}$$

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

2. Find the value of each expression.