

Lesson 14: Represent Division of Whole Numbers by Unit Fractions

- Let's solve problems involving division of a unit fraction by a whole number.

Warm-up: Number Talk: Increasing Quotients

Find the value of each expression mentally.

- $6 \div 1$

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

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

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

14.1: 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?

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

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

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

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

What is the same about problem set A and B? What is different?

14.2: Match the Situation to the Expression

1. Match each problem to an expression that represents the problem. Some expressions will not have a match. Be prepared to explain your reasoning.
 - 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.