Illustrative Mathematics

Grade 5 Unit 3
Lesson 18

Unit 3 Lesson 18: Represent Situations with Multiplication and Division

WU Number talk: Three and a Tenth (Warm up)

Student Task Statement

Find the value of each expression mentally.

- $3 \times \frac{1}{10}$
- $\frac{1}{10} \times 3$
- $\frac{1}{10} \div 3$
- $3 \div \frac{1}{10}$

1 Putting it All Together: Multiplication and Division

Student Task Statement

1. Diego's dad is making hamburgers for the picnic. There are 2 pounds of beef in the package. Each burger uses $\frac{1}{4}$ pound. How many burgers can be made with the beef in the package?
    a. Draw a diagram to represent the situation.
    b. Write a division equation to represent the situation.
    c. Write a multiplication equation to represent the situation.
2. Diego and Clare are going to equally share $\frac{1}{4}$ pound of potato salad. How many pounds of potato salad will each person get?
    a. Draw a diagram to represent the situation.
    b. Write a division equation to represent the situation.
    c. Write a multiplication equation to represent the situation.

2 Multiplication or Division?

Student Task Statement

For your set of problems:

- Write a multiplication or division expression for each situation.
- Answer the question and write an equation. Make sure to include appropriate units. Draw a diagram, if needed.
- Trade papers with your partner, and check your partner's equations. If you disagree, work to reach an agreement.

Partner A:

1. The distance from Han's house to Priya's house is $\frac{4}{5}$ kilometer. Han has walked $\frac{3}{4}$ of the way already. How many kilometers has he walked?
2. Clare's science class will test water samples in class. If there is a total of $\frac{1}{2}$ gallon of water and 10 groups, how much water will each group get if they split the water equally?
3. A container with 3 kilograms of strawberries is $\frac{1}{5}$ full. How many kilograms can the container hold?

Partner B:

1. It takes Han 4 minutes to walk $\frac{1}{3}$ kilometer. How many minutes will it take him to walk 1 kilometer?
2. Clare's goal was to collect 4 kilograms of soil sample for her science project. She collected $2\frac{2}{3}$ times her goal. How many kilograms of soil did Clare collect?
3. A container that can hold a $\frac{1}{2}$ pound of strawberries is $\frac{3}{5}$ full. How many pounds of strawberries are in the container?