4-9: Learning Goals

- Let’s practice dividing fractions in different situations.

4-9-1: Greater than 1 or Less than 1?

Decide whether each of the following is greater than 1 or less than 1.

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

2. $1 \div \frac{3}{4}$

3. $\frac{2}{3} \div \frac{7}{8}$

4. $2\frac{7}{8} \div 2\frac{3}{5}$

4-9-2: Two Water Containers

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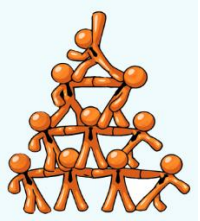
1. After looking at these pictures, Lin says, "I see the fraction $\frac{2}{5}$." Jada says, "I see the fraction $\frac{3}{4}$." What quantities are Lin and Jada referring to?

2. How many liters of water fit in the water dispenser?



Write a multiplication equation and a division equation for the question, then find the answer. Draw a diagram, if needed. Check your answer using the multiplication equation.

4-9-3: Amount in One Group

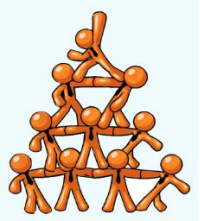
Write a multiplication equation and a division equation and draw a diagram to represent each situation and question. Then find the answer. Explain your reasoning.

1. Jada bought $3\frac{1}{2}$ yards of fabric for $21. How much did each yard cost?

2. $\frac{4}{9}$ kilogram of baking soda costs $2. How much does 1 kilogram of baking soda cost?

3. Diego can fill $1\frac{1}{5}$ bottles with 3 liters of water. How many liters of water fill 1 bottle?

4. $\frac{5}{4}$ gallons of water fill $\frac{5}{6}$ of a bucket. How many gallons of water fill the entire bucket?



4-9-4: Inventing a Situation

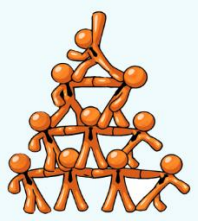
1. Think of a situation that involves a question that can be represented by $\frac{1}{3} \div \frac{1}{4} = ?$ Write a description of that situation and the question.

2. Trade descriptions with a member of your group.

    - Review each other's description and discuss whether each invented question is an appropriate match for the equation.

    - Revise your description or question based on feedback from your partner.

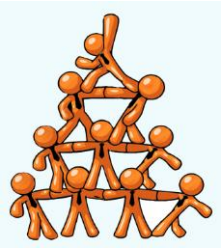
3. Find the answer to your question. Explain or show your reasoning. If you get stuck, draw a diagram.



4-9: Lesson Synthesis

How long is a whole trip if $\frac{2}{3}$ of a trip is $\frac{4}{5}$ mile?

- What is the 'one group' we are interested in here?
- Do we know the number of groups or the fraction of a group?
- What multiplication equation and division equations can we write to represent this situation?
- How can we interpret $\frac{2}{3} \cdot ? = \frac{4}{5}$? in this context?
- How might we set up a tape diagram to help us answer the question?



4-9: Learning Targets

- I can find the amount in one group in different real-world situations.

4-9-5: Refilling a Soap Dispenser

Noah fills a soap dispenser from a big bottle that contains $2\frac{1}{3}$ liters of liquid soap. That amount of soap will fill $3\frac{1}{2}$ dispensers. How many liters of soap fit into one dispenser?

Use the diagram below to answer the question. Label all relevant parts of the diagram.