Lesson 2: Interpreting Division of a Whole Number by a Fraction—Visual Models

Classwork

Example 1

Question #_____

Write it as a division question.   _____

Write it as a multiplication question.   _____

Make a rough draft of a model to represent the question:

As you travel to each model, be sure to answer the following questions:

Original Questions	Write the division question that was answered in each model.	What multiplication question could the model also answer?	Write the question given to each group as a multiplication question.
1. How many $\frac{1}{2}$ miles are in 12 miles?			
2. How many quarter hours are in 5 hours?			
3. How many $\frac{1}{3}$ cups are in 9 cups?			
4. How many $\frac{1}{8}$ pizzas are in 4 pizzas?			
5. How many one-fifths are in 7 wholes?			

Example 2

Molly uses 9 cups of flour to bake bread. If this is $\frac{3}{4}$ of the total amount of flour she started with, what was the original amount of flour?

a.   Create a model to represent what the question is asking.

b.   Explain how you would determine the answer using the model.

Exercises 1–5

1.   A construction company is setting up signs on 4 miles of the road. If the company places a sign every $\frac{1}{8}$ of a mile, how many signs will it need?

2. George bought 12 pizzas for a birthday party. If each person will eat $\frac{3}{8}$ of a pizza, how many people can George feed with 12 pizzas?

3. The Lopez family adopted 6 miles of trail on the Erie Canal. If each family member can clean up $\frac{3}{4}$ of a mile, how many family members are needed to clean the adopted section?

4. Margo is freezing 8 cups of strawberries. If this is $\frac{2}{3}$ of the total strawberries that were picked, how many cups of strawberries did Margo pick?

5. Regina is chopping up wood. She has chopped 10 logs so far. If the 10 logs represent $\frac{5}{8}$ of all the logs that need to be chopped, how many logs need to be chopped in all?

Problem Set

Rewrite each problem as a multiplication question. Model your answer.

1. Nicole has used 6 feet of ribbon. This represents $\frac{3}{8}$ of the total amount of ribbon she started with. How much ribbon did Nicole have at the start?

2. How many quarter hours are in 5 hours?