

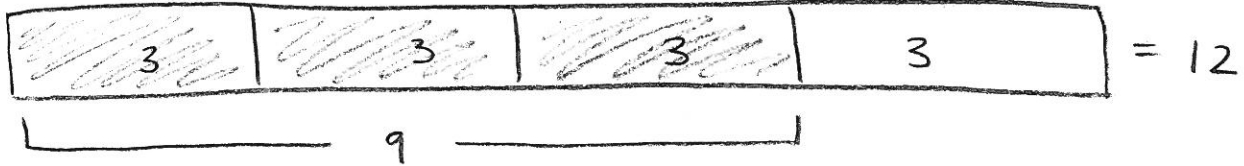
As you travel to each model, be sure to answer the following questions:

Original Question	Corresponding Division Expression	Corresponding Multiplication Expression	Write an Equation Showing the Equivalence of the Two Expressions.
1. How many $\frac{1}{2}$ miles are in 12 miles?	$12 \div \frac{1}{2}$	$12 \cdot 2$	$12 \div \frac{1}{2} = 12 \cdot 2$
2. How many quarter hours are in 5 hours?	$5 \div \frac{1}{4}$	$5 \cdot 4$	$5 \div \frac{1}{4} = 5 \cdot 4$
3. How many $\frac{1}{3}$ cups are in 9 cups?	$9 \div \frac{1}{3}$	$9 \cdot 3$	$9 \div \frac{1}{3} = 9 \cdot 3$
4. How many $\frac{1}{8}$ pizzas are in 4 pizzas?	$4 \div \frac{1}{8}$	$4 \cdot 8$	$4 \div \frac{1}{8} = 4 \cdot 8$
5. How many one-fifths are in 7 wholes?	$7 \div \frac{1}{5}$	$7 \cdot 5$	$7 \div \frac{1}{5} = 7 \cdot 5$

Example 2

Molly has 9 cups of flour. If this is $\frac{3}{4}$ of the number she needs to make bread, how many cups does she need?

- a. Construct the tape diagram by reading it backward. Draw a tape diagram and label the unknown.



- b. ~~Next, shade in $\frac{3}{4}$.~~

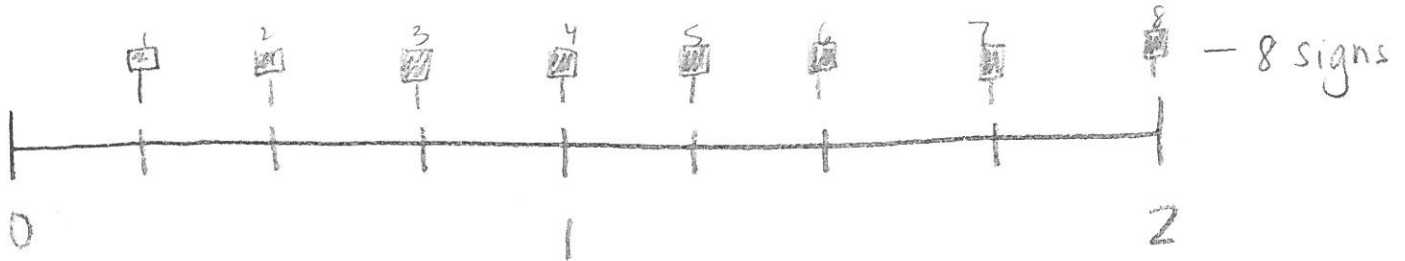
- c. ~~Label the shaded region to show that 9 is equal to $\frac{3}{4}$ of the total.~~

- d. Analyze the model to determine the quotient.

$$9 \div \frac{3}{4} = 9 \div 3 \times 4 = 12$$

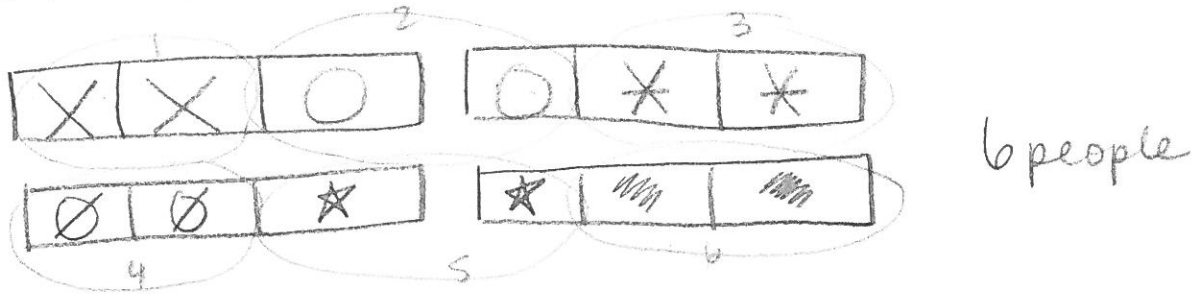
Exercises 1–5

1. A construction company is setting up signs on 2 miles of road. If the company places a sign every $\frac{1}{4}$ mile, how many signs will it use?



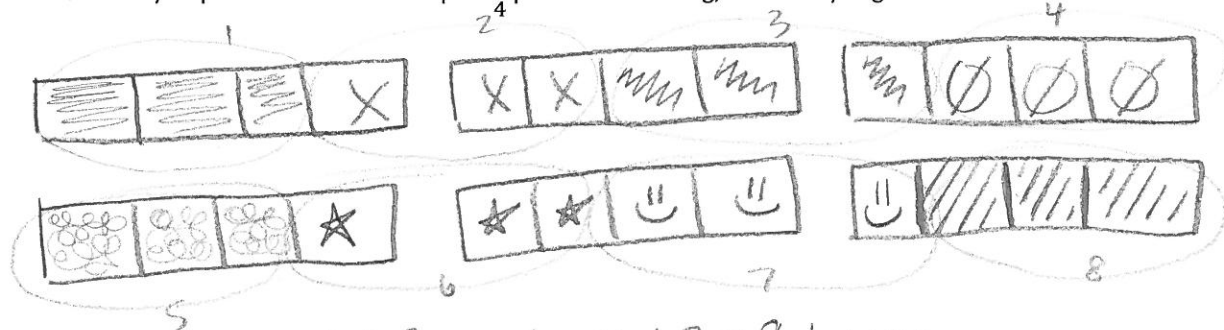
$$2 \div \frac{1}{4} = 2 \times 4 = 8$$

2. George bought 4 submarine sandwiches for a birthday party. If each person will eat $\frac{2}{3}$ of a sandwich, how many people can George feed?



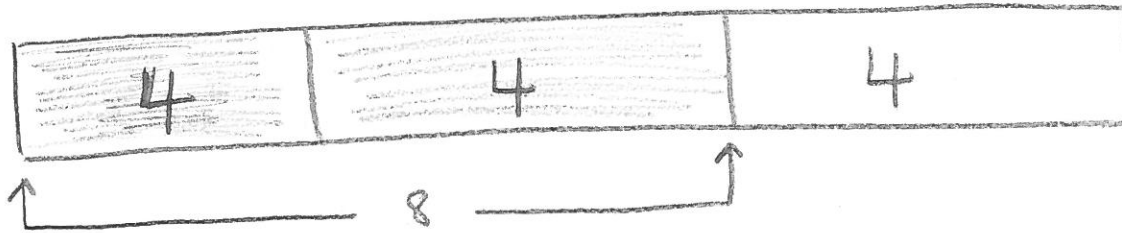
$$4 \div \frac{2}{3} = 4 \times 3 \div 2 = 6 \text{ people}$$

3. Miranda buys 6 pounds of nuts. If she puts $\frac{3}{4}$ pound in each bag, how many bags can she make?



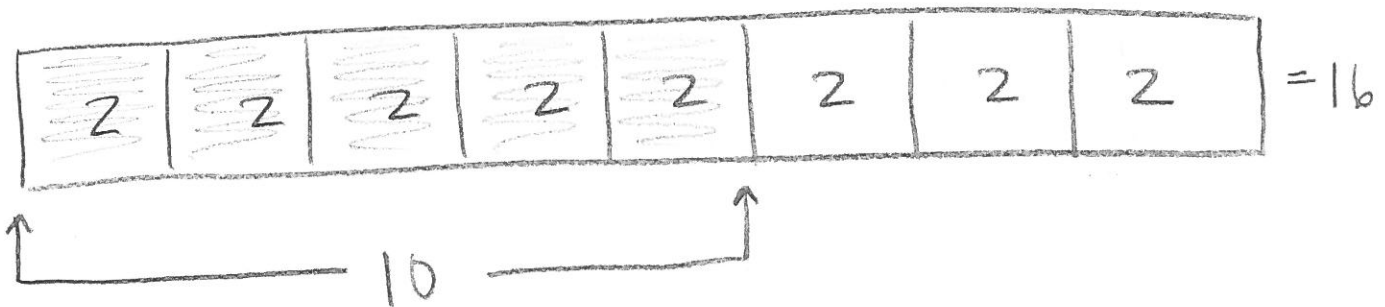
$$6 \div \frac{3}{4} = 6 \times 4 \div 3 = 8 \text{ bags}$$

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



$$8 \div \frac{2}{3} = 8 \div 2 \times 3 = 12$$

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?



$$10 \div \frac{5}{8} = 10 \div 5 \times 8 = 16$$