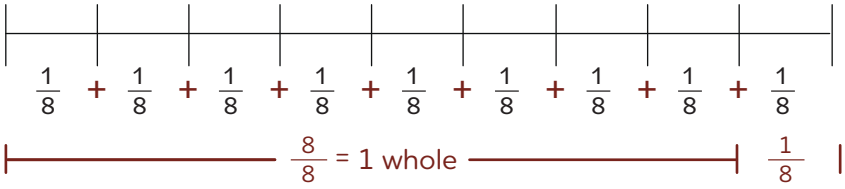
Illustrating Whole Number and Fraction Multiplication #2

When multiplying a whole number by a fraction, it can be helpful to show what's happening using a **number line**. This can be done in a few easy steps!

Consider: $9 \times \frac{1}{8}$

The number of spaces you will draw on the number line corresponds to the whole number you are multiplying the fraction by!



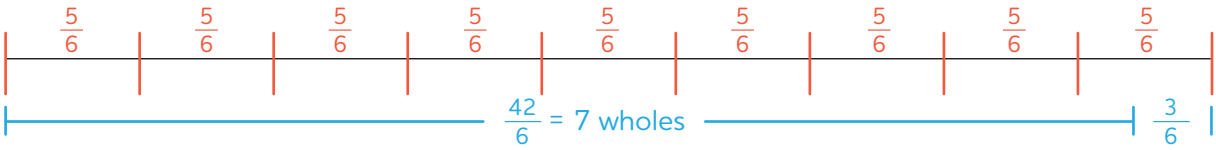
Step 1: Graph the multiplication expression $9 \times \frac{1}{8}$ as repeated addition on a number line. Then simplify the fraction below.

Step 2: State the equation, including the product.

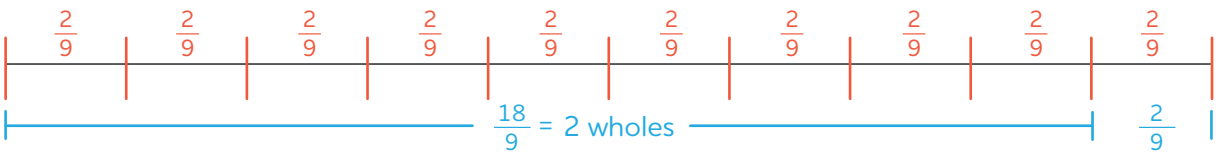
$$9 \times \frac{1}{8} = 1\frac{1}{8}$$

Part 1: Graph each multiplication expression as repeated addition on a number line.

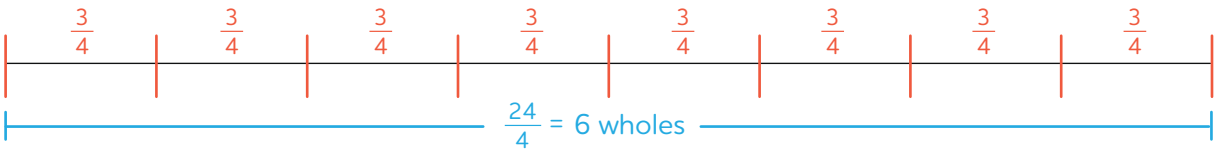
1. $9 \times \frac{5}{6}$



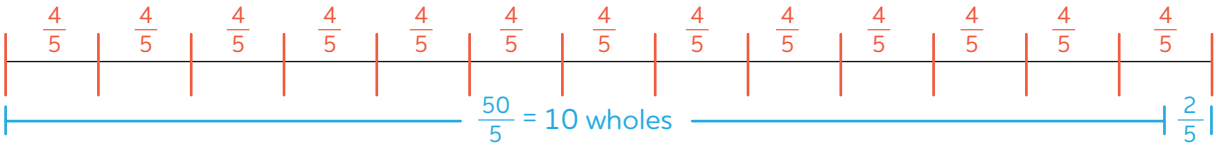
2. $10 \times \frac{2}{9}$



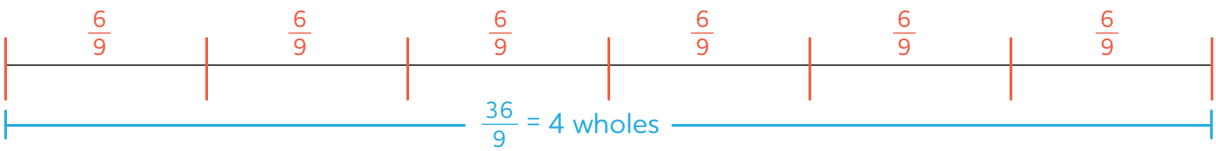
3. $8 \times \frac{3}{4}$



4. $13 \times \frac{4}{5}$



5. $6 \times \frac{6}{9}$



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Part 2: Now, state the product for each multiplication expression you graphed in Part 1.

1. $9 \times \frac{5}{6} =$ $7\frac{3}{6}$

2. $10 \times \frac{2}{9} =$ $2\frac{2}{9}$

3. $8 \times \frac{3}{4} =$ 6

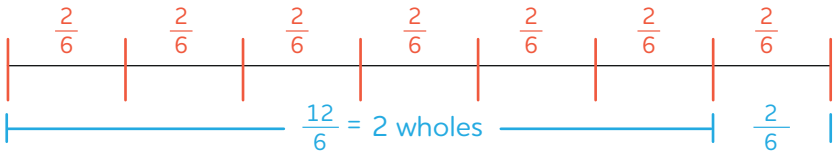
4. $13 \times \frac{4}{5} =$ $10\frac{2}{5}$

5. $6 \times \frac{6}{9} =$ 4

Try these! Solve each of the following multiplication expressions using the two-step procedure described on page 1.

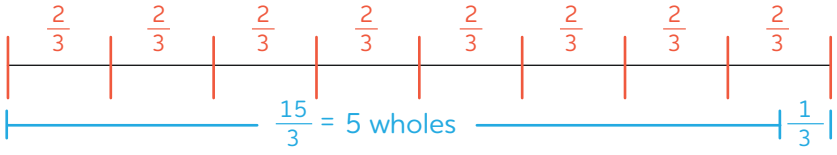
Step 1: **Step 2:**

1. $7 \times \frac{2}{6} =$



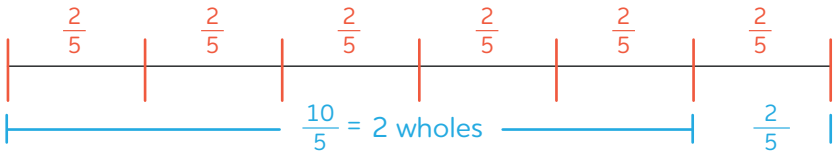
$2\frac{2}{6}$

2. $8 \times \frac{2}{3} =$



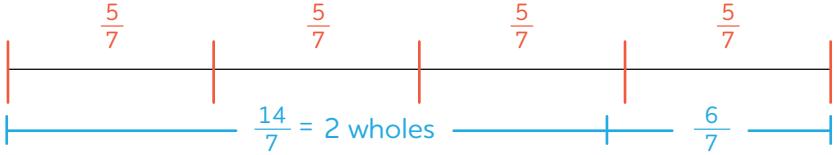
$5\frac{1}{3}$

3. $6 \times \frac{2}{5} =$



$2\frac{2}{5}$

4. $4 \times \frac{5}{7} =$



$2\frac{6}{7}$