



# Use Multiples to Find Equivalent Fractions

Let's look at a way to find equivalent fractions without using diagrams.

## Warm-up

### Notice and Wonder: Four Equations

What do you notice? What do you wonder?

$$\bullet \quad \frac{1}{3} = \frac{2}{6}$$

$$\bullet \quad \frac{2}{3} = \frac{4}{6}$$

$$\bullet \quad \frac{3}{3} = \frac{6}{6}$$

$$\bullet \quad \frac{4}{3} = \frac{8}{6}$$

## Activity 1

### Elena's Way

Elena thought of another way to find equivalent fractions. She wrote:

$$\frac{1 \times 2}{5 \times 2} = \frac{2}{10}$$

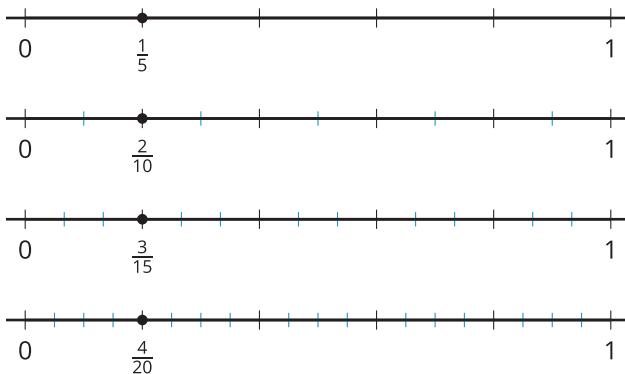
$$\frac{1 \times 3}{5 \times 3} = \frac{3}{15}$$

$$\frac{1 \times 4}{5 \times 4} = \frac{4}{20}$$

$$\frac{1 \times 5}{5 \times 5} = \frac{5}{25}$$

$$\frac{1 \times 10}{5 \times 10} = \frac{10}{50}$$

1. Analyze Elena's work. Then discuss these questions with a partner:
  - a. How are Elena's equations related to Andre's number lines?



2. Use Elena's strategy to find 5 fractions that are equivalent to  $\frac{1}{8}$ . Use number lines to check your thinking, if they help.

## Activity 2

### Equivalence Hunting

Look at Elena's strategy from an earlier activity.

1. Could her strategy help you know whether 2 fractions are equivalent? Try using it to check the equivalence of the following pairs of fractions. If they are equivalent, write an equation to show it.

a.  $\frac{5}{2}$  and  $\frac{10}{8}$

b.  $\frac{2}{6}$  and  $\frac{4}{12}$

2. Find all fractions in the list that are equivalent to  $\frac{3}{4}$ . Be prepared to explain or show how you know.

$$\frac{2}{10}$$

$$\frac{6}{8}$$

$$\frac{12}{15}$$

$$\frac{30}{40}$$

$$\frac{8}{9}$$

$$\frac{12}{20}$$

$$\frac{12}{16}$$

$$\frac{15}{20}$$

$$\frac{8}{10}$$

$$\frac{24}{32}$$

$$\frac{75}{100}$$

$$\frac{60}{80}$$