



# Equivalent Fractions on the Number Line

Let's use number lines to reason about equivalent fractions.

## Warm-up

### Estimation Exploration: A Shaded Portion

The whole diagram represents 1. What fraction of the diagram is shaded?



Make an estimate that is:

| too low | about right | too high |
|---------|-------------|----------|
|         |             |          |

## Activity 1

### Handy Number Lines

Andre used number lines to find fractions that are equivalent to  $\frac{1}{5}$ .

He drew this number line:



Then he drew 3 copies of the number line. He wrote a different fraction for the same point on each line:



1. How did Andre use the number lines to find fractions equivalent to  $\frac{1}{5}$ ? Explain your thinking to a partner.
2. How can number lines be used to show whether these pairs of fractions are equivalent?

a.  $\frac{8}{10}$  and  $\frac{4}{5}$

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b.  $\frac{14}{20}$  and  $\frac{4}{5}$

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3. Find 3 fractions that are equivalent to  $\frac{6}{5}$ . Explain or show how Andre's number lines can help.

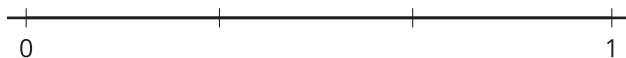
## Activity 2

### Can It Be Done?

1. Priya wants to find fractions that are equivalent to  $\frac{2}{3}$ , other than  $\frac{4}{6}$ . She wonders if she can find equivalent fractions with denominators 9, 10, and 12.

$$\frac{\quad}{9} \qquad \frac{\quad}{10} \qquad \frac{\quad}{12}$$

Can it be done? Use number lines to show your reasoning.



2. Represent  $\frac{1}{10}$  on a number line. Then find 2 fractions that are equivalent to  $\frac{1}{10}$ . How would you use the number lines to show that they are equivalent to  $\frac{1}{10}$ ?



3. Can you find an equivalent fraction for  $\frac{1}{10}$  with 100 for the denominator? Explain or show your reasoning.

