

Lesson 8: Equivalent Fractions on the Number Line

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

Warm-up: Estimation Exploration: A Shaded Portion

If the entire diagram represents 1 whole, about what fraction is shaded?



Make an estimate that is:

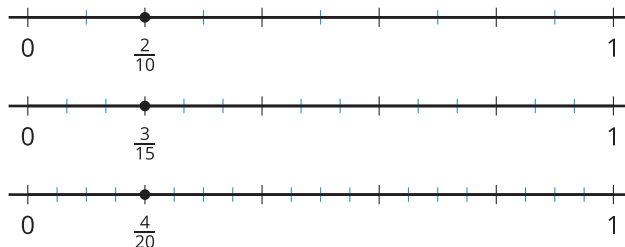
too low	about right	too high

8.1: 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 three more lines and wrote a fraction for the 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 the following fractions are equivalent?

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

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

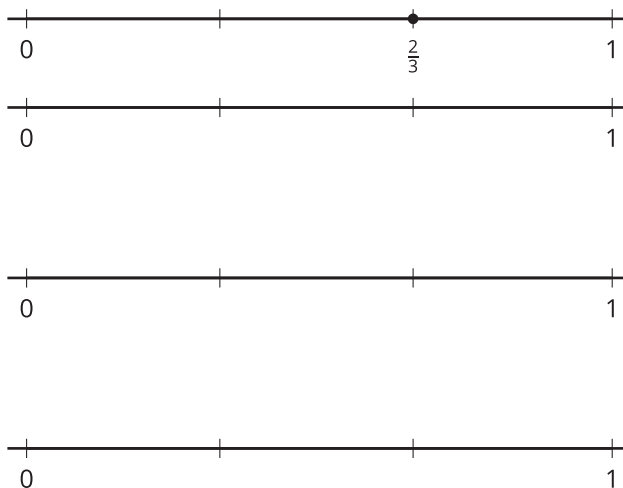
3. Find three fractions that are equivalent to $\frac{6}{5}$. Explain or show how Andre's number lines can help.

8.2: Can It Be Done?

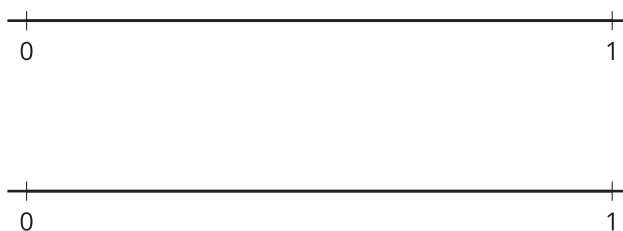
- Priya wants to find fractions that are equivalent to $\frac{2}{3}$, other than $\frac{4}{6}$. She wonders if she can find equivalent fractions with denominator 9, 10, and 12.

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

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



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



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