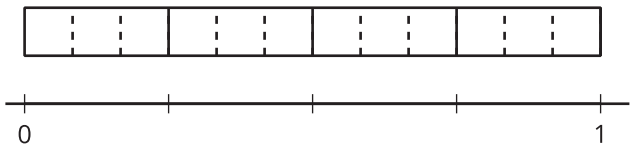
Lesson 4: Same Size, Related Sizes

- Let's find some fractions that are the same size.

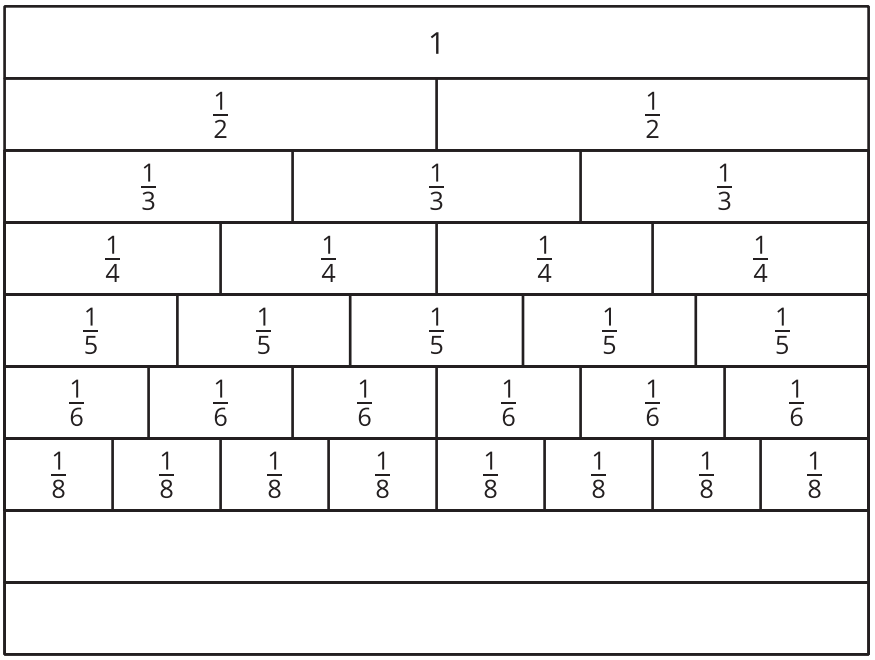
Warm-up: Notice and Wonder: A Fraction Strip and a Number Line

What do you notice? What do you wonder?



4.1: Same Size, Different Numbers

Here's a diagram of fraction strips, with two strips added for tenths and twelfths.



1. Use a blank strip to show tenths. Label the parts. How did you partition the strip?

2. Use a blank strip to show twelfths. Label the parts. How did you partition the strip?

3. Jada says, "I noticed that one part of $\frac{1}{2}$ is the same size as two parts of $\frac{1}{4}$ and three parts of $\frac{1}{6}$. So $\frac{1}{2}$, $\frac{2}{4}$, and $\frac{3}{6}$ must be **equivalent**."

   Find a fraction that is equivalent to each of the following fractions. Be prepared to explain your reasoning.

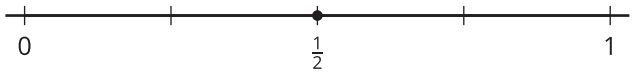
   a. $\frac{1}{6}$

   b. $\frac{2}{10}$

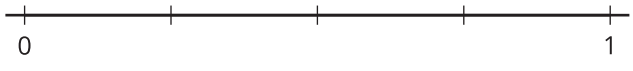
   c. $\frac{3}{3}$

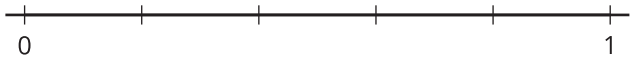
4.2: Fractions on Number Lines

1. Here are some number lines. The point on this number line shows the fraction $\frac{1}{2}$.



Label the tick marks on each number line.





2. Suppose you are to locate $\frac{1}{6}$, $\frac{1}{8}$, and $\frac{1}{10}$ on one of the number lines.

   a. Which number line would you use for each fraction? Be prepared to explain your reasoning.

   b. Locate and label each fraction ($\frac{1}{6}$, $\frac{1}{8}$, and $\frac{1}{10}$) on a different number line.

3. Locate and label each of the following fractions on one of the number lines.

$\frac{2}{3}$	$\frac{2}{8}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{6}$
$\frac{4}{8}$	$\frac{4}{10}$	$\frac{6}{6}$	$\frac{6}{10}$	$\frac{8}{8}$