Name _____

Compare Fractions Using Benchmarks

I Can use benchmarks to compare fractions.

Florida's B.E.S.T.
- **Fractions** 4.FR.1.4
- **Mathematical Thinking & Reasoning** MTR.2.1, MTR.3.1, MTR.4.1, MTR.5.1

UNLOCK the Problem Real World

Arlo made a popcorn snack. He mixed $\frac{5}{8}$ gallon of popcorn with $\frac{1}{2}$ gallon of dried apple rings. Did he use more dried apple rings or more popcorn?

Activity Compare $\frac{5}{8}$ and $\frac{1}{2}$.

Materials ■ fraction strips

Use fraction strips to compare $\frac{5}{8}$ and $\frac{1}{2}$. Record on the model below.

$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

$\frac{5}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

$\frac{5}{8}$ ◯ $\frac{1}{2}$

So, Arlo used more _____.

1. Write 5 fractions equivalent to $\frac{1}{2}$. What is the relationship between the numerator and the denominator of fractions equivalent to $\frac{1}{2}$?

_____

_____

Math Talk

MTR 3.1 Complete tasks with mathematical fluency.

How are the number of $\frac{1}{8}$-size pieces in $\frac{5}{8}$ related to the number of $\frac{1}{8}$-size pieces you need to make $\frac{1}{2}$?

2. How many eighths are equivalent to $\frac{1}{2}$?

_____

3. How can you compare $\frac{5}{8}$ and $\frac{1}{2}$ without using a model?

_____

_____

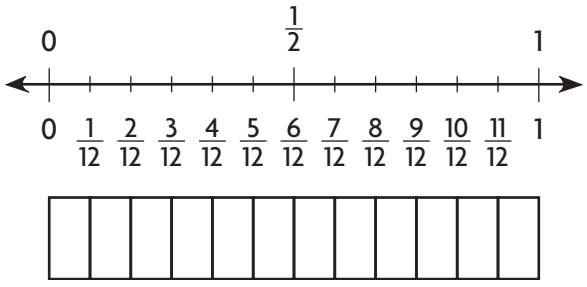
Benchmarks A **benchmark** is a known size or amount that helps you understand a different size or amount. You can use $\frac{1}{2}$ as a benchmark to help you compare fractions.

Example Use benchmarks to compare fractions.

A family hiked the same mountain trail. Blythe and her father hiked $\frac{5}{12}$ of the trail before they stopped for lunch. Isolda and her mother hiked $\frac{9}{10}$ of the trail before they stopped for lunch. Who hiked farther before lunch?

Compare $\frac{5}{12}$ and $\frac{9}{10}$ to the benchmark $\frac{1}{2}$.

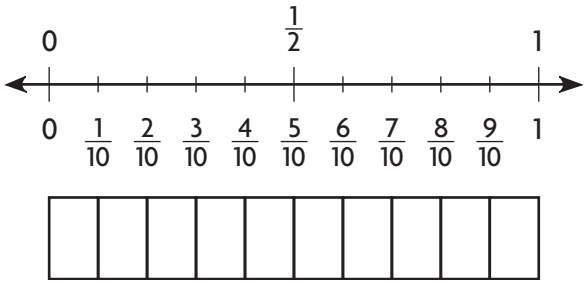
STEP 1 Compare $\frac{5}{12}$ to $\frac{1}{2}$.



Think: Shade $\frac{5}{12}$.

$\frac{5}{12} \bigcirc \frac{1}{2}$

STEP 2 Compare $\frac{9}{10}$ to $\frac{1}{2}$.



Think: Shade $\frac{9}{10}$.

$\frac{9}{10} \bigcirc \frac{1}{2}$

Since $\frac{5}{12}$ is _____ than $\frac{1}{2}$ and $\frac{9}{10}$ is _____ than $\frac{1}{2}$, you know that $\frac{5}{12} \bigcirc \frac{9}{10}$.

So, _____ hiked farther before lunch.

4. Explain how you can tell $\frac{5}{12}$ is less than $\frac{1}{2}$ without using a model.

_____

_____

5. Explain how you can tell $\frac{9}{10}$ is greater than $\frac{1}{2}$ without using a model.

_____

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