Comparing Fractions Using Models

Lesson 2

TARGET

I can compare two or more fractions using models.

You can compare two fractions by shading equal-sized models. Look at the two models below. There is less area shaded in the model of $\frac{1}{2}$ than in the model of $\frac{2}{3}$. Therefore, $\frac{1}{2}$ is less than $\frac{2}{3}$.

$\frac{1}{2}$ is less than $\frac{2}{3}$

This can also be written $\frac{1}{2} < \frac{2}{3}$.

Math Symbols for Comparing

< less than

> greater than

= equal to

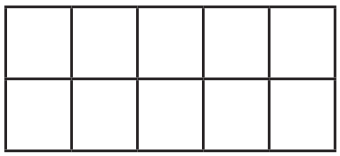
Compare $\frac{2}{5}$ and $\frac{1}{3}$ using circle models.

More area is shaded on this model so it is the larger number.

$\frac{2}{5}$ is greater than $\frac{1}{3}$

$\frac{2}{5} > \frac{1}{3}$

Compare $\frac{8}{10}$ and $\frac{3}{5}$. Use >, < or =.



$\frac{8}{10}$

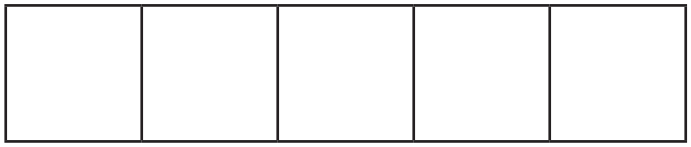
Shade the correct number of boxes.

$\frac{3}{5}$

$\frac{8}{10}$ ◯ $\frac{3}{5}$

Use the fraction models to compare $\frac{4}{5}$, $\frac{1}{2}$ and $\frac{2}{3}$.

$\frac{4}{5}$



$\frac{1}{2}$

$\frac{2}{3}$

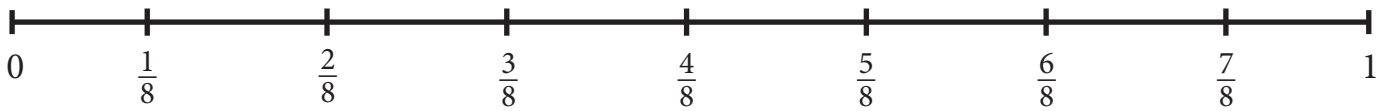
Shade to represent each fraction.

List the fractions in order from least to greatest.

◯ ◯ ◯

least → greatest

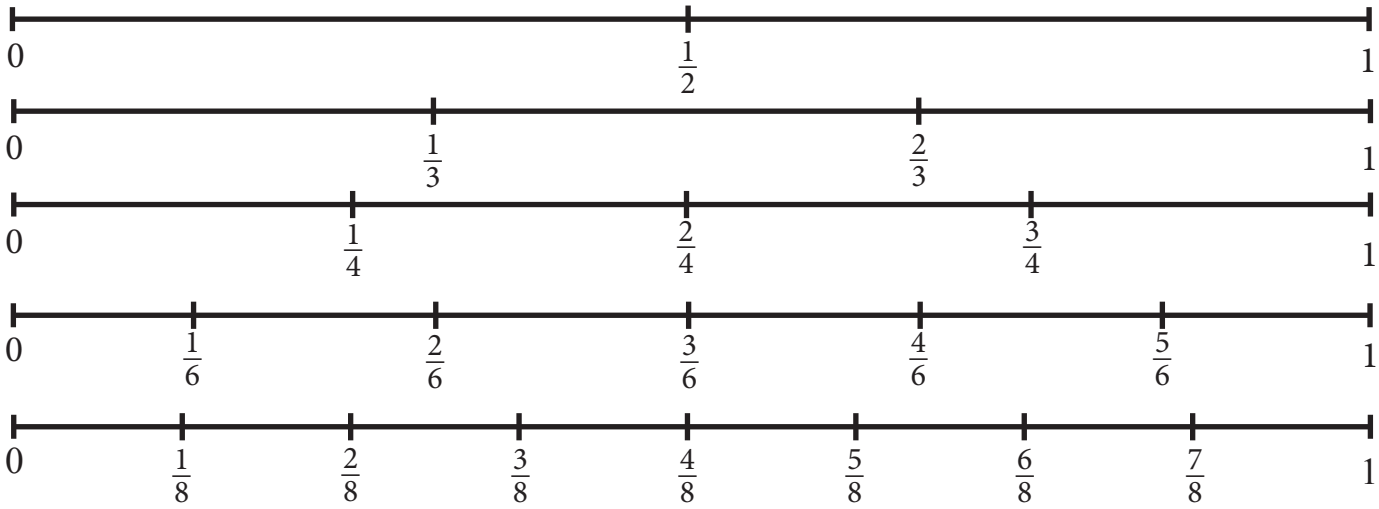
Number lines can also be used to compare fractions.



→ Fractions get larger from left to right. →

You can use a set of number lines to compare fractions with different denominators.

- Locate each fraction you are comparing on the number line(s).
- The fraction that is further to the right is the larger fraction.
- Put >, < or = between the fractions in your answer.



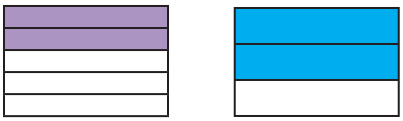
Compare each pair of fractions using >, < or = using the number lines above.

$\frac{3}{4} > \frac{1}{3}$	$\frac{2}{8}$ ◯ $\frac{1}{4}$	$\frac{1}{3}$ ◯ $\frac{4}{8}$
$\frac{6}{8}$ ◯ $\frac{2}{3}$	$\frac{1}{6}$ ◯ $\frac{1}{3}$	$\frac{3}{6}$ ◯ $\frac{1}{2}$

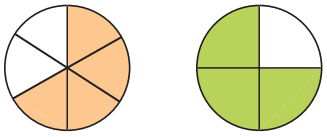
Use the number line to list the fractions from least to greatest: $\frac{5}{8}, \frac{3}{4}, \frac{5}{6}, \frac{1}{2}$.

Name: **Practice**

1. Fill in the blanks with greater than, less than or equal to.



$\frac{2}{5}$ $\frac{2}{3}$

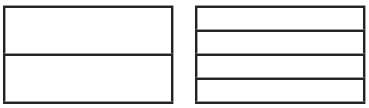


$\frac{4}{6}$ $\frac{3}{4}$

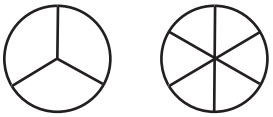
$\frac{2}{5}$ is _____ $\frac{2}{3}$

$\frac{4}{6}$ is _____ $\frac{3}{4}$

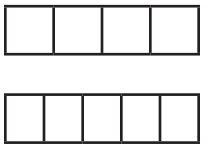
2. For each set of models, shade to match the fractions. Compare each pair of fractions using >, < or =.



$\frac{1}{2}$ ○ $\frac{3}{4}$



$\frac{1}{3}$ ○ $\frac{2}{6}$



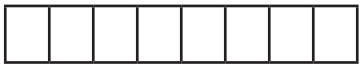
$\frac{3}{4}$ ○ $\frac{3}{5}$

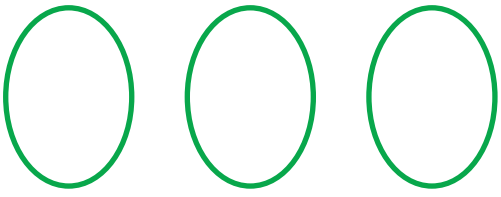
3. Shade each model to represent the given fraction. Then list the fractions in order from least to greatest.

$\frac{2}{6}$

$\frac{1}{4}$

$\frac{3}{8}$

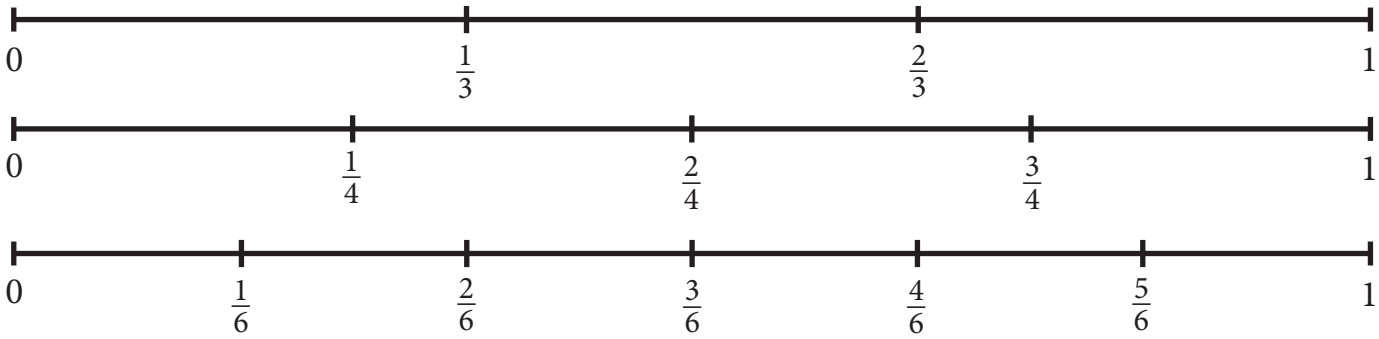




least ⟶ greatest

4. Numbers on a number line get _____ as you move from left to right.

5. Use the number lines below to compare each pair of fractions using >, < or =.



$\frac{5}{6} \bigcirc \frac{3}{4}$ $\frac{2}{4} \bigcirc \frac{3}{6}$ $\frac{1}{4} \bigcirc \frac{2}{6}$

$\frac{1}{6} \bigcirc \frac{1}{3}$ $\frac{4}{6} \bigcirc \frac{2}{4}$ $\frac{2}{3} \bigcirc \frac{4}{6}$

6. Fill in each box with a fraction from the number lines above that makes the statement true.

$\square > \frac{3}{4}$ $\frac{1}{3} > \square$ $\square = \frac{2}{6}$

7. List the fractions below from least to greatest. Use words to explain how you determined the order.

$\frac{5}{6}, \frac{2}{3}, \frac{2}{4}, \frac{3}{4}$

8. Sean compared $\frac{3}{4}$ and $\frac{3}{3}$. He decided he did not need to draw a model or use a number line because 4 is larger than 3 so $\frac{3}{4}$ is larger than $\frac{3}{3}$. Do you agree or disagree? Use words and/or models to support your answer.

9. Kristi does not understand how to use number lines to compare fractions. Explain to her how number lines can be used to compare fractions.

10. Kennedy had $\frac{1}{4}$ cup of raisins. Paul had $\frac{1}{2}$ cup of raisins. Who had more? Explain how you know your answer is correct.

11. Write a comparison of the two fractions shown in the models using >, < or =.