Grade 3 Math

3.NF.3d

Standard: Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Objective: I can compare two fractions with the same numerator.

Instructional learning video* to support the objective:

https://youtu.be/2BxsmPo-zXI

1. **Practice Worksheet**: EnVision Guided Reteach 13-4, Homework and Practice 13-4

2. **Fun Online Practice:** Go on ST Math 30 minutes a day (access through Clever)

3. **Problem of the Day** (POD):

4. **Fluency Practice**: See the **NEW** Multiplication Fluency Folder for instructional videos and fun games to play!

Games to play to support fractions:

Compare Fractions of a Whole Game

Additional Online Resources:

- Imagine Learning (via Clever)

Viewing the YouTube videos is optional as an enrichment opportunity. YouTube is a third party and has no contractual relationships with BPS. BPS cannot ensure that YouTube is safeguarding or protecting your child's privacy.

Name _____

Another Look!

Compare $\frac{1}{3}$ and $\frac{1}{4}$. $\frac{1}{3}$ ←—same numerators—→ $\frac{1}{4}$

$\frac{1}{3}$ ←—different denominators—→ $\frac{1}{4}$
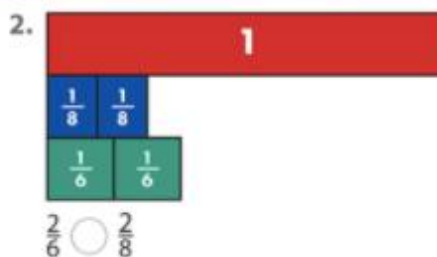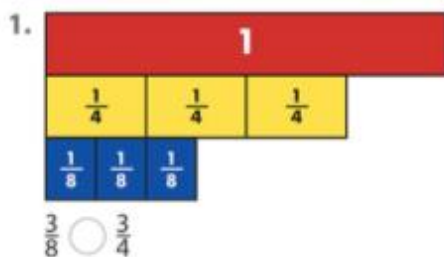
| 1 |

| $\frac{1}{4}$ |

| $\frac{1}{3}$ |

> You can use fraction strips to represent and compare fractions with the same numerator. The $\frac{1}{3}$ strip represents a greater part of the whole.

The $\frac{1}{4}$ strip is not as long as the $\frac{1}{3}$ strip. These fractions have the same numerator, which means the fraction with the lesser denominator is greater.

So, $\frac{1}{3} > \frac{1}{4}$.

In **1–12**, compare. Write $<$, $>$, or $=$. Use or draw fraction strips to help. The fractions refer to the same whole.

1.

| 1 |

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

| $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |

$\frac{3}{8}$ ◯ $\frac{3}{4}$

2.

| 1 |

| $\frac{1}{8}$ | $\frac{1}{8}$ |

| $\frac{1}{6}$ | $\frac{1}{6}$ |

$\frac{2}{6}$ ◯ $\frac{2}{8}$

3.

| 1 |

$\frac{4}{6}$ ◯ $\frac{4}{6}$

4.

| 1 |

$\frac{2}{8}$ ◯ $\frac{2}{3}$

5. $\frac{2}{3}$ ◯ $\frac{2}{4}$

**6.** $\frac{1}{8}$ ◯ $\frac{1}{4}$

7. $\frac{3}{6}$ ◯ $\frac{3}{6}$

8. $\frac{1}{2}$ ◯ $\frac{1}{3}$

13. Ivan played basketball for two thirds of an hour on Tuesday and two fourths of an hour on Wednesday. Which day did he spend the most time playing basketball? Use the symbols $>$, $<$, or $=$ to compare.

Write each fraction and then compare.

14. ⊚ **MP.4 Model with Math** On a trip to the beach, Josie collected 64 shells. Her father collected 57 shells, and her mother collected 73 shells. How many shells did Josie's parents collect? Complete the bar diagram to help solve the problem.

? shells →

| 57 | |

Father's
57 shells

Mother's
73 shells
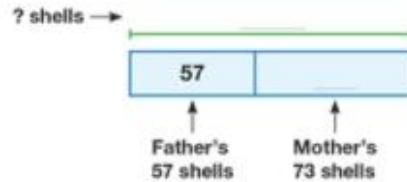
15. **Math and Science** A plant's life has different stages. Leah measured the length of a seed. It was $\frac{1}{4}$ inch long. She then planted the seed. It grew into a seedling that was $\frac{3}{4}$ inch long. Use the fraction strips to compare the two fractions. Write $<$, $>$, or $=$.

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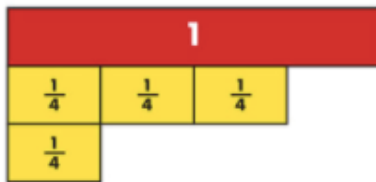
1		
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

$\frac{1}{4}$

16. **Higher Order Thinking** There are 4 people in Mitchell's family and 3 people in Paul's family. Each family buys the same-sized bag of trail mix to share equally. Who gets more trail mix, Mitchell or Paul? Use reasoning about fraction size to explain how you know.

17. Circle the solid figure that has 2 flat surfaces and 0 vertices. What is this solid figure called?

18. These fractions refer to the same whole. Which of these comparisons are correct? Choose all that apply.

☐ $\frac{3}{4} = \frac{3}{4}$
☐ $\frac{1}{6} < \frac{1}{4}$
☐ $\frac{5}{8} > \frac{5}{6}$

☐ $\frac{2}{8} = \frac{2}{3}$
☐ $\frac{4}{6} < \frac{4}{8}$

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A-Z **Vocabulary**

1. When you **compare** fractions, you decide if one fraction is greater than or less than another fraction. The whole must be the same size when comparing fractions.

   Two walls are the same size. One wall is painted $\frac{1}{2}$ gray, and the other wall is painted $\frac{1}{3}$ gray.

   Which is greater, $\frac{1}{2}$ or $\frac{1}{3}$? _____
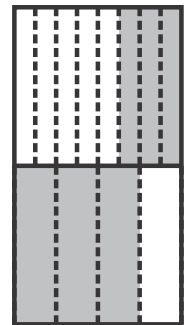
   Record the comparison using symbols.

   $\frac{1}{2}$ ◯ $\frac{1}{3}$

2. A piece of art consists of two wood panels of the same size. The top panel is $\frac{3}{8}$ gray. The bottom panel is $\frac{3}{4}$ gray.

   Which is greater, $\frac{3}{8}$ or $\frac{3}{4}$? _____

   Record the comparison using symbols.

   $\frac{3}{8}$ ◯ $\frac{3}{4}$

3. Use the fraction strips to complete the statement.

   If two fractions have the same numerator, the

   fraction with the greater _____

   is _____ than the other fraction.

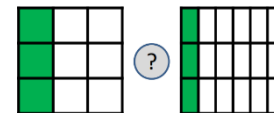| 1		
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

On the Back!

4. Draw fraction strips to compare the size of $\frac{1}{4}$ and $\frac{1}{6}$. Use symbols to record the comparison.

Compare Fractions of a Whole

Materials: fraction cards showing two models
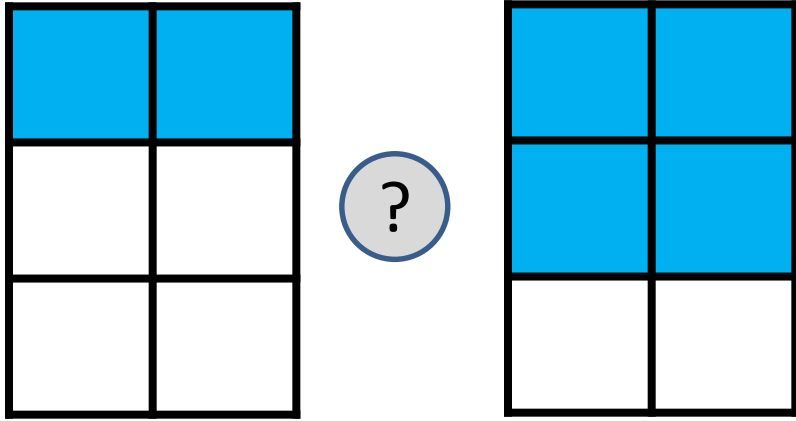
_____

1. Choose a fraction card. Look closely at each model to determine how many total parts are in the whole (denominator) and how many equal parts are shaded (numerator).

2. Compare the fractions using the symbols <, >, or =. Explain your reasoning using pictures, words and numbers.
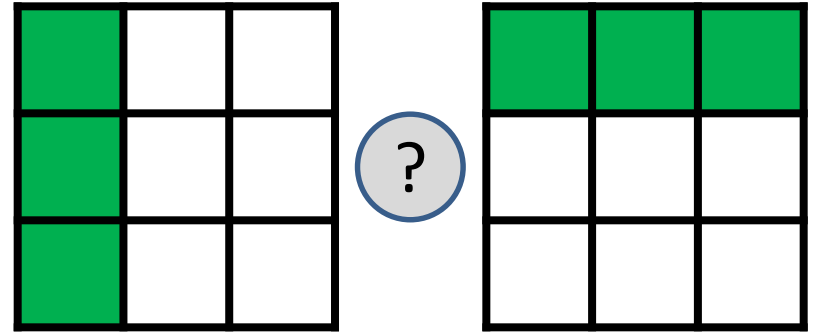
3. Repeat with other cards.

Example: $\frac{4}{5} > \frac{2}{5}$ because 4 pieces that are fifths are more than 2 pieces that are fifths.

4. How can you compare two fractions with the same denominator that refer to the same whole? How can you compare two fractions with the same numerator that refer to the same whole? Explain.
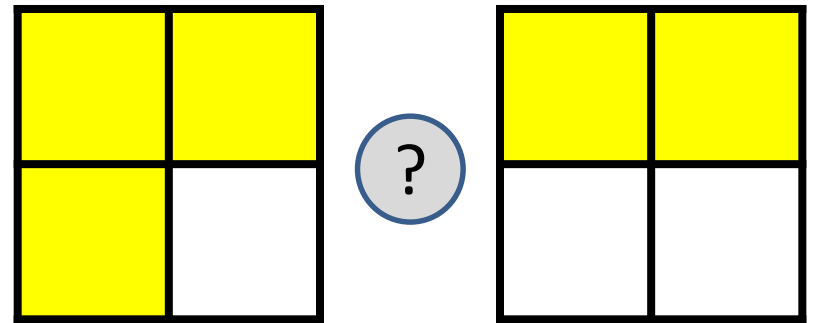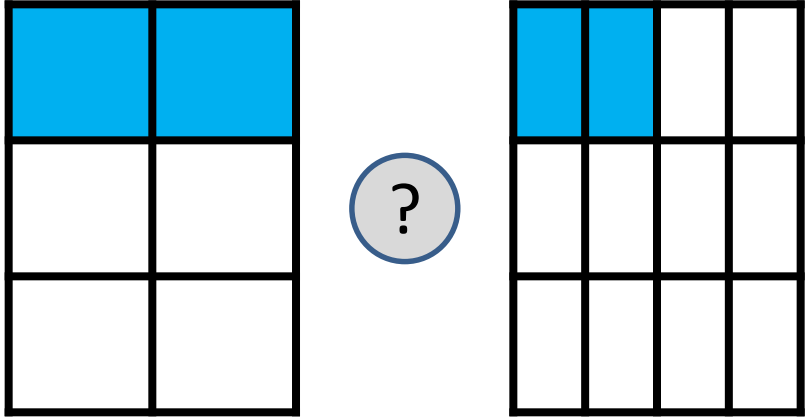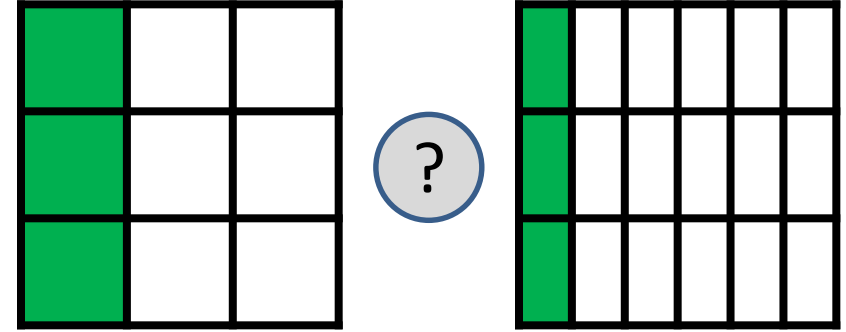
A.

B.

C.

D.

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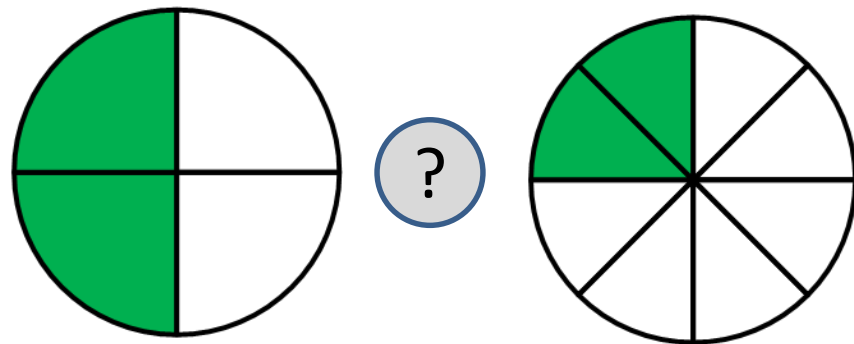
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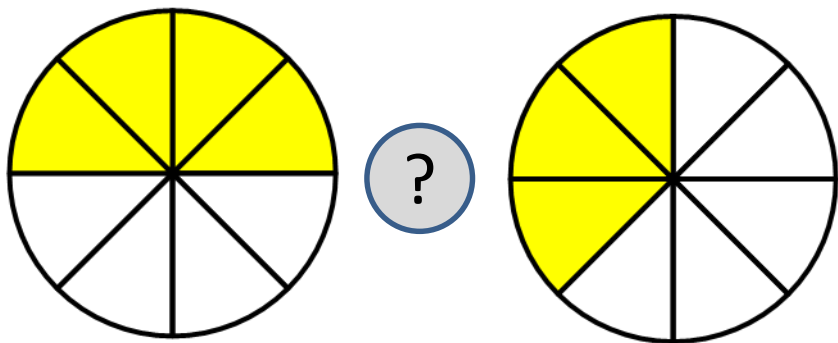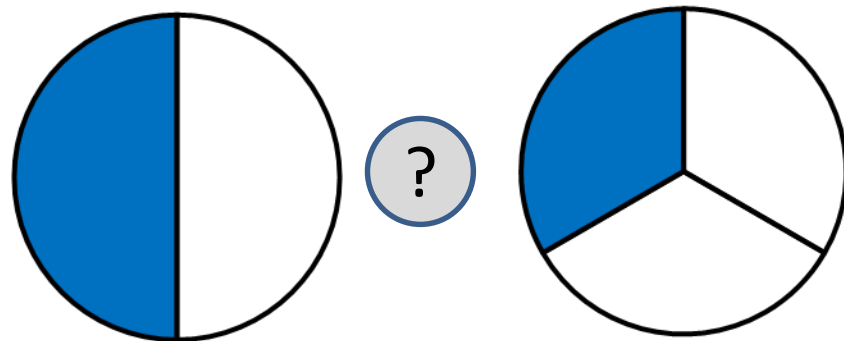

F.

G.

H.

I.

?

J.

?

K.

?

L.

?

Vocabulary

1. When you **compare** fractions, you decide if one fraction is greater than or less than another fraction. The whole must be the same size when comparing fractions.

   Two walls are the same size. One wall is painted $\frac{1}{2}$ gray, and the other wall is painted $\frac{1}{3}$ gray.

   Which is greater, $\frac{1}{2}$ or $\frac{1}{3}$? _____

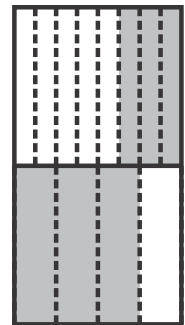   Record the comparison using symbols.

   $\frac{1}{2}$ ◯ $\frac{1}{3}$

2. A piece of art consists of two wood panels of the same size. The top panel is $\frac{3}{8}$ gray. The bottom panel is $\frac{3}{4}$ gray.

   Which is greater, $\frac{3}{8}$ or $\frac{3}{4}$? _____
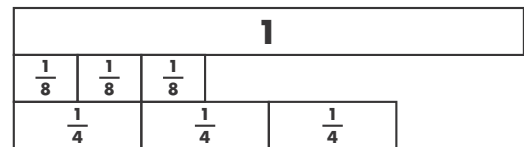
   Record the comparison using symbols.

   $\frac{3}{8}$ ◯ $\frac{3}{4}$

3. Use the fraction strips to complete the statement.

   If two fractions have the same numerator, the

   fraction with the greater _____

   is _____ than the other fraction.

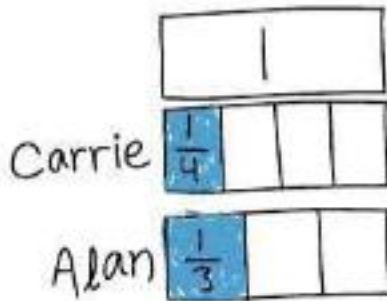 | 1 | | |
   |---|---|---|
   | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |
   | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |

On the Back!

4. Draw fraction strips to compare the size of $\frac{1}{4}$ and $\frac{1}{6}$.
   Use symbols to record the comparison.

Problem of the Day Answer Key

Janie's Work

Carrie $\frac{1}{4}$

Alan $\frac{1}{3}$

$$\frac{1}{3} > \frac{1}{4}$$

My fraction strip models show that $\frac{1}{3}$ is greater than $\frac{1}{4}$. Alan ate more vegetables than Carrie.

Name _____

Another Look!

Compare $\frac{1}{3}$ and $\frac{1}{4}$. $\frac{1}{3}$ ← same numerators → $\frac{1}{4}$
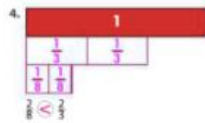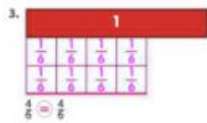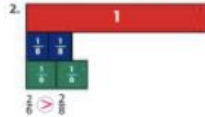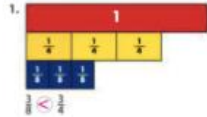   ← different denominators →

You can use fraction strips to represent and compare fractions with the same numerator. The $\frac{1}{3}$ strip represents a greater part of the whole.

The $\frac{1}{4}$ strip is not as long as the $\frac{1}{3}$ strip. These fractions have the same numerator, which means the fraction with the lesser denominator is greater.

So, $\frac{1}{3} > \frac{1}{4}$.

In **1–12**, compare. Write $<$, $>$, or $=$. Use or draw fraction strips to help. The fractions refer to the same whole.

1. $\frac{3}{4} < \frac{3}{4}$

2. $\frac{2}{8} > \frac{2}{6}$

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

4. $\frac{2}{8} < \frac{2}{3}$

5. $\frac{2}{3} > \frac{2}{4}$

6. $\frac{1}{8} < \frac{1}{4}$

7. $\frac{3}{6} = \frac{3}{6}$

8. $\frac{1}{2} > \frac{1}{4}$

9. $\frac{4}{4} > \frac{4}{6}$

10. $\frac{3}{3} > \frac{2}{3}$

11. $\frac{2}{8} = \frac{2}{8}$

12. $\frac{6}{8} < \frac{6}{3}$

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13. Ivan played basketball for two thirds of an hour on Tuesday and two fourths of an hour on Wednesday. Which day did he spend the most time playing basketball? Use the symbols $>$, $<$, or $=$ to compare.

Tuesday; $\frac{2}{3} > \frac{2}{4}$

Write each fraction and then compare.

14. MP.4 Model with Math On a trip to the beach, Josie collected 64 shells. Her father collected 57 shells, and her mother collected 73 shells. How many shells did Josie's parents collect? Complete the bar diagram to help solve the problem.

? shells → | 130 |
| 57 | 73 |
Father's 57 shells   Mother's 73 shells
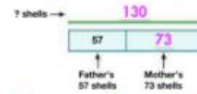
The parents collected 130 shells.

15. **Math and Science** A plant's life has different stages. Leah measured the length of a seed. It was $\frac{1}{4}$ inch long. She then planted the seed. It grew into a seedling that was $\frac{1}{3}$ inch long. Use the fraction strips to compare the two fractions. Write $<$, $>$, or $=$.

$\frac{1}{4} < \frac{1}{3}$
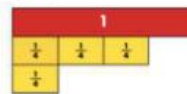
16. **Higher Order Thinking** There are 4 people in Mitchell's family and 3 people in Paul's family. Each family buys the same-sized bag of trail mix to share equally. Who gets more trail mix, Mitchell or Paul? Use reasoning about fraction size to explain how you know.

Paul; Sample answer: Mitchell gets $\frac{1}{4}$; Paul gets $\frac{1}{3}$. Paul gets more because $\frac{1}{3}$ and $\frac{1}{4}$ have the same numerator, but $3 < 4$, so $\frac{1}{3}$ is greater than $\frac{1}{4}$.

17. Circle the solid figure that has 2 flat surfaces and 0 vertices. What is this solid figure called?
Cylinder

18. These fractions refer to the same whole. Which of these comparisons are correct? Choose all that apply.

☑ $\frac{2}{4} = \frac{2}{4}$
☑ $\frac{3}{6} < \frac{3}{4}$
☐ $\frac{3}{6} > \frac{3}{4}$
☐ $\frac{2}{8} = \frac{2}{3}$
☐ $\frac{2}{4} < \frac{2}{3}$