

Comparing Fractions

Use models to compare fractions. Write $>$, $<$ or $=$.

Shade both fractions on the strips. Then compare them.

Example



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

1.



$$\frac{3}{4} < \frac{5}{6}$$

2.



$$\frac{1}{2} < \frac{3}{8}$$

3.



$$\frac{6}{8} > \frac{3}{4}$$

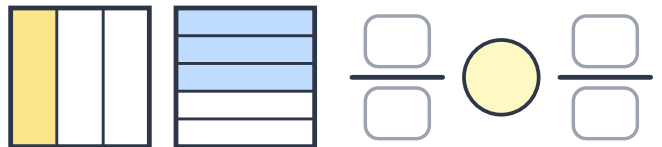
Write the fraction each model shows. Then compare.

Example



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

4.



$$\frac{\quad}{\quad} < \frac{\quad}{\quad}$$

5.



$$\frac{\quad}{\quad} < \frac{\quad}{\quad}$$

6.



$$\frac{\quad}{\quad} < \frac{\quad}{\quad}$$

Comparing Fractions

Rename fractions with a common denominator. Then compare.

List multiples. Circle the common denominator in both lists.

Example 4 and 6

4: 4 8 **12** 16 20

6: 6 **12** 18 24 30

1. 3 and 5

3: 3 _____

5: 5 _____

2. 8 and 12

8: 8 _____

12: 12 _____

Rename one fraction so the denominators match. Then compare.

Example

$$\frac{3}{4} = \frac{\boxed{6}}{\boxed{8}} > \frac{5}{8}$$

3.

$$\frac{2}{3} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{5}{6}$$

4.

$$\frac{7}{10} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{3}{5}$$

5.

$$\frac{1}{2} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{7}{12}$$

6.

$$\frac{3}{8} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{1}{4}$$

7.

$$\frac{4}{5} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{8}{10}$$

Rename both fractions. Then compare.

Example

$$\frac{2}{3} = \frac{\boxed{8}}{\boxed{12}} < \frac{\boxed{9}}{\boxed{12}} = \frac{3}{4}$$

8.

$$\frac{3}{4} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{4}{6}$$

9.

$$\frac{3}{5} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{1}{2}$$

10.

$$\frac{3}{8} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{1}{3}$$

11.

$$\frac{3}{8} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{5}{12}$$

12.

$$\frac{1}{4} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{\boxed{}}{\boxed{}} = \frac{3}{10}$$

Comparing Fractions

Compare with common numerators and the benchmarks $\frac{1}{2}$ and 1.

Same numerators: the fraction with bigger parts is greater.

Example

$$\frac{3}{5} > \frac{3}{8}$$

1. $\frac{2}{12} \bigcirc \frac{2}{6}$

2. $\frac{5}{6} \bigcirc \frac{5}{8}$

3. $\frac{4}{10} \bigcirc \frac{4}{5}$

Rename to make the numerators the same. Then compare.

Example

$$\frac{2}{3} = \frac{\boxed{4}}{\boxed{6}} < \frac{4}{5}$$

4. $\frac{3}{4} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{6}{10}$

5. $\frac{1}{2} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{3}{4}$

6. $\frac{2}{5} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{4}{12}$

Compare each fraction with $\frac{1}{2}$. Then compare the two fractions.

Example

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

So $\frac{3}{8} < \frac{4}{6}$

7. $\frac{7}{12} \bigcirc \frac{1}{2} \quad \frac{2}{5} \bigcirc \frac{1}{2}$

So $\frac{7}{12} \bigcirc \frac{2}{5}$

8. $\frac{4}{10} \bigcirc \frac{1}{2} \quad \frac{5}{8} \bigcirc \frac{1}{2}$

So $\frac{4}{10} \bigcirc \frac{5}{8}$

9. $\frac{5}{6} \bigcirc \frac{1}{2} \quad \frac{1}{3} \bigcirc \frac{1}{2}$

So $\frac{5}{6} \bigcirc \frac{1}{3}$

How far is each fraction from 1? The one closer to 1 is greater.

Example

$$\frac{7}{8} \text{ is } \frac{\boxed{1}}{\boxed{8}} \text{ from 1.} \quad \frac{9}{10} \text{ is } \frac{\boxed{1}}{\boxed{10}} \text{ from 1.} \quad \text{So } \frac{7}{8} < \frac{9}{10}$$

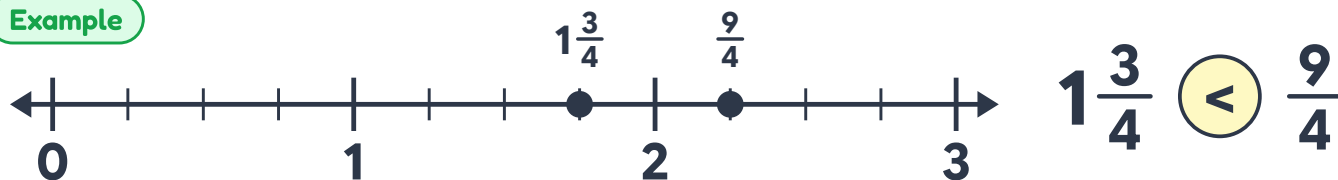
10. $\frac{5}{6}$ is $\frac{\boxed{}}{\boxed{}}$ from 1. $\frac{4}{5}$ is $\frac{\boxed{}}{\boxed{}}$ from 1. So $\frac{5}{6} \bigcirc \frac{4}{5}$

Comparing Fractions

Compare mixed numbers and fractions greater than 1.

Mark both numbers on the number line. Then compare.

Example



1.



2.



Compare. Then explain how you know.

Example

$$2\frac{1}{4} < 2\frac{1}{3}$$

How I know: The wholes are the same.

$$\frac{1}{4} < \frac{1}{3}, \text{ so } 2\frac{1}{4} < 2\frac{1}{3}.$$

3.

$$3\frac{5}{8} > 2\frac{7}{8}$$

How I know: _____

4.

$$\frac{11}{4} > 2\frac{1}{2}$$

How I know: _____

5.

$$1\frac{5}{6} > 1\frac{11}{12}$$

How I know: _____

Comparing Fractions

Order fractions from least to greatest. Solve the stories.

Write the numbers in order from least to greatest.

Example

$$\frac{1}{2}, \frac{3}{8}, \frac{2}{3}$$

$$\frac{3}{8} < \frac{1}{2} < \frac{2}{3}$$

$$1. \frac{2}{5}, \frac{3}{10}, \frac{1}{2}, \frac{4}{5}$$

$$\square < \square < \square < \square$$

$$2. 1\frac{1}{3}, \frac{5}{4}, 1\frac{1}{6}$$

$$\square < \square < \square$$

$$3. \frac{4}{5}, 0.7, \frac{3}{4}$$

$$\square < \square < \square$$

Solve. Then explain how you know.

Example

Maya ran $\frac{7}{8}$ mile. Leo ran $\frac{3}{4}$ mile. Who ran farther?

Answer: Maya.

Why: $\frac{3}{4} = \frac{6}{8}$, and $\frac{7}{8} > \frac{6}{8}$. So Maya ran farther.

4. A red ribbon is $\frac{3}{5}$ yard long. A blue ribbon is $\frac{3}{4}$ yard long. Which ribbon is longer?

Answer: _____

Why: _____

5. The pizzas are the same size. Ana ate $\frac{3}{8}$ of one, Ben ate $\frac{1}{3}$ and Eli ate $\frac{5}{12}$. Who ate the most? Who ate the least?

Answer: _____

Why: _____

6. Sam's plant is $2\frac{1}{2}$ inches tall. Kim's plant is $\frac{9}{4}$ inches tall. Whose plant is taller?

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$$\frac{6}{8} \bigcirc \frac{3}{4}$$

Write the fraction each model shows. Then compare.

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Rename fractions with a common denominator. Then compare.

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Rename both fractions. Then compare.

Example

$$\frac{2}{3} = \frac{\boxed{8}}{\boxed{12}} < \frac{\boxed{9}}{\boxed{12}} = \frac{3}{4}$$

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2. $\frac{5}{6} \bigcirc \frac{5}{8}$

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Rename to make the numerators the same. Then compare.

Example

$$\frac{2}{3} = \frac{\boxed{4}}{\boxed{6}} < \frac{4}{5}$$

4. $\frac{3}{4} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{6}{10}$

5. $\frac{1}{2} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{3}{4}$

6. $\frac{2}{5} = \frac{\boxed{}}{\boxed{}} \bigcirc \frac{4}{12}$

Compare each fraction with $\frac{1}{2}$. Then compare the two fractions.

Example

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

So $\frac{3}{8} < \frac{4}{6}$

7. $\frac{7}{12} \bigcirc \frac{1}{2} \quad \frac{2}{5} \bigcirc \frac{1}{2}$

So $\frac{7}{12} \bigcirc \frac{2}{5}$

8. $\frac{4}{10} \bigcirc \frac{1}{2} \quad \frac{5}{8} \bigcirc \frac{1}{2}$

So $\frac{4}{10} \bigcirc \frac{5}{8}$

9. $\frac{5}{6} \bigcirc \frac{1}{2} \quad \frac{1}{3} \bigcirc \frac{1}{2}$

So $\frac{5}{6} \bigcirc \frac{1}{3}$

How far is each fraction from 1? The one closer to 1 is greater.

Example

$$\frac{7}{8} \text{ is } \frac{\boxed{1}}{\boxed{8}} \text{ from 1. } \frac{9}{10} \text{ is } \frac{\boxed{1}}{\boxed{10}} \text{ from 1. So } \frac{7}{8} < \frac{9}{10}$$

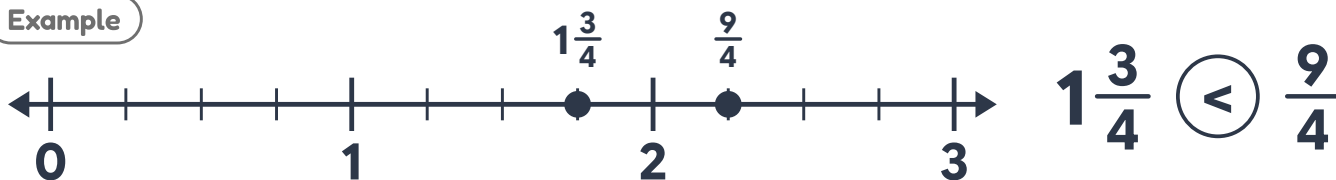
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Comparing Fractions

Compare mixed numbers and fractions greater than 1.

Mark both numbers on the number line. Then compare.

Example



1.



2.



Compare. Then explain how you know.

Example

$$2\frac{1}{4} < 2\frac{1}{3}$$

How I know: The wholes are the same.

$$\frac{1}{4} < \frac{1}{3}, \text{ so } 2\frac{1}{4} < 2\frac{1}{3}.$$

3.

$$3\frac{5}{8} < 2\frac{7}{8}$$

How I know: _____

4.

$$\frac{11}{4} < 2\frac{1}{2}$$

How I know: _____

5.

$$1\frac{5}{6} < 1\frac{11}{12}$$

How I know: _____

Comparing Fractions

Order fractions from least to greatest. Solve the stories.

Write the numbers in order from least to greatest.

Example

$$\frac{1}{2}, \frac{3}{8}, \frac{2}{3}$$

$$\frac{3}{8} < \frac{1}{2} < \frac{2}{3}$$

$$1. \frac{2}{5}, \frac{3}{10}, \frac{1}{2}, \frac{4}{5}$$

$$\square < \square < \square < \square$$

$$2. 1\frac{1}{3}, \frac{5}{4}, 1\frac{1}{6}$$

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Solve. Then explain how you know.

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Maya ran $\frac{7}{8}$ mile. Leo ran $\frac{3}{4}$ mile. Who ran farther?

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Comparing Fractions

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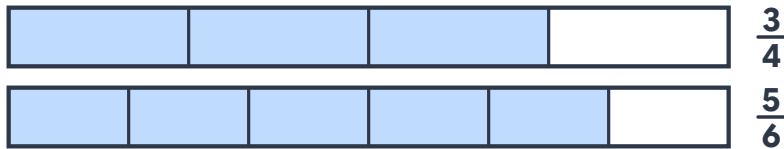
Shade both fractions on the strips. Then compare them.

Example



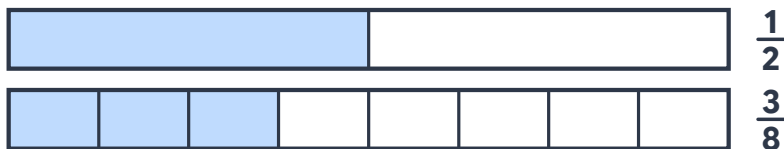
$$\frac{2}{3} > \frac{3}{5}$$

1.



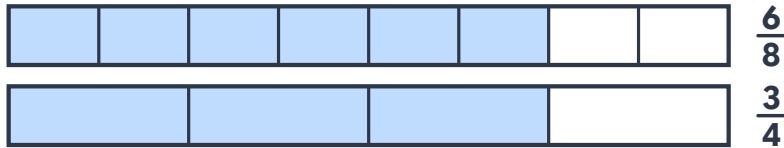
$$\frac{3}{4} < \frac{5}{6}$$

2.



$$\frac{1}{2} > \frac{3}{8}$$

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$$\frac{6}{8} = \frac{3}{4}$$

Write the fraction each model shows. Then compare.

Example



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

4.



$$\frac{1}{3} < \frac{3}{5}$$

5.



$$\frac{3}{10} < \frac{1}{2}$$

6.



$$\frac{3}{4} > \frac{4}{10}$$

Comparing Fractions

Rename fractions with a common denominator. Then compare.

List multiples. Circle the common denominator in both lists.

Example 4 and 6

4: 4 8 12 16 20

6: 6 12 18 24 30

1. 3 and 5

3: 3 6 9 12 15

5: 5 10 15 20 25

2. 8 and 12

8: 8 16 24 32 40

12: 12 24 36 48 60

Rename one fraction so the denominators match. Then compare.

Example

$$\frac{3}{4} = \frac{\boxed{6}}{\boxed{8}} > \frac{5}{8}$$

3.

$$\frac{2}{3} = \frac{\boxed{4}}{\boxed{6}} < \frac{5}{6}$$

4.

$$\frac{7}{10} > \frac{\boxed{6}}{\boxed{10}} = \frac{3}{5}$$

5.

$$\frac{1}{2} = \frac{\boxed{6}}{\boxed{12}} < \frac{7}{12}$$

6.

$$\frac{3}{8} > \frac{\boxed{2}}{\boxed{8}} = \frac{1}{4}$$

7.

$$\frac{4}{5} = \frac{\boxed{8}}{\boxed{10}} = \frac{8}{10}$$

Rename both fractions. Then compare.

Example

$$\frac{2}{3} = \frac{\boxed{8}}{\boxed{12}} < \frac{\boxed{9}}{\boxed{12}} = \frac{3}{4}$$

8.

$$\frac{3}{4} = \frac{\boxed{9}}{\boxed{12}} > \frac{\boxed{8}}{\boxed{12}} = \frac{4}{6}$$

9.

$$\frac{3}{5} = \frac{\boxed{6}}{\boxed{10}} > \frac{\boxed{5}}{\boxed{10}} = \frac{1}{2}$$

10.

$$\frac{3}{8} = \frac{\boxed{9}}{\boxed{24}} > \frac{\boxed{8}}{\boxed{24}} = \frac{1}{3}$$

11.

$$\frac{3}{8} = \frac{\boxed{9}}{\boxed{24}} < \frac{\boxed{10}}{\boxed{24}} = \frac{5}{12}$$

12.

$$\frac{1}{4} = \frac{\boxed{5}}{\boxed{20}} < \frac{\boxed{6}}{\boxed{20}} = \frac{3}{10}$$

Comparing Fractions

Compare with common numerators and the benchmarks $\frac{1}{2}$ and 1.

Same numerators: the fraction with bigger parts is greater.

Example

$$\frac{3}{5} > \frac{3}{8}$$

1. $\frac{2}{12} < \frac{2}{6}$

2. $\frac{5}{6} > \frac{5}{8}$

3. $\frac{4}{10} < \frac{4}{5}$

Rename to make the numerators the same. Then compare.

Example

$$\frac{2}{3} = \frac{4}{6} < \frac{4}{5}$$

4. $\frac{3}{4} = \frac{6}{8} > \frac{6}{10}$

5. $\frac{1}{2} = \frac{3}{6} < \frac{3}{4}$

6. $\frac{2}{5} = \frac{4}{10} > \frac{4}{12}$

Compare each fraction with $\frac{1}{2}$. Then compare the two fractions.

Example

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

So $\frac{3}{8} < \frac{4}{6}$

7. $\frac{7}{12} > \frac{1}{2} \quad \frac{2}{5} < \frac{1}{2}$

So $\frac{7}{12} > \frac{2}{5}$

8. $\frac{4}{10} < \frac{1}{2} \quad \frac{5}{8} > \frac{1}{2}$

So $\frac{4}{10} < \frac{5}{8}$

9. $\frac{5}{6} > \frac{1}{2} \quad \frac{1}{3} < \frac{1}{2}$

So $\frac{5}{6} > \frac{1}{3}$

How far is each fraction from 1? The one closer to 1 is greater.

Example

$$\frac{7}{8} \text{ is } \frac{1}{8} \text{ from 1. } \frac{9}{10} \text{ is } \frac{1}{10} \text{ from 1. So } \frac{7}{8} < \frac{9}{10}$$

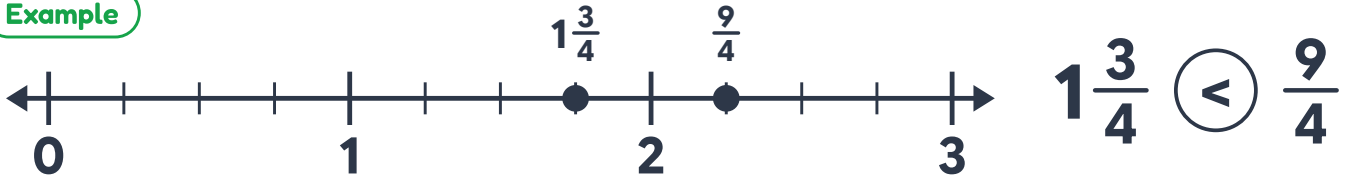
10. $\frac{5}{6}$ is $\frac{1}{6}$ from 1. $\frac{4}{5}$ is $\frac{1}{5}$ from 1. So $\frac{5}{6} > \frac{4}{5}$

Comparing Fractions

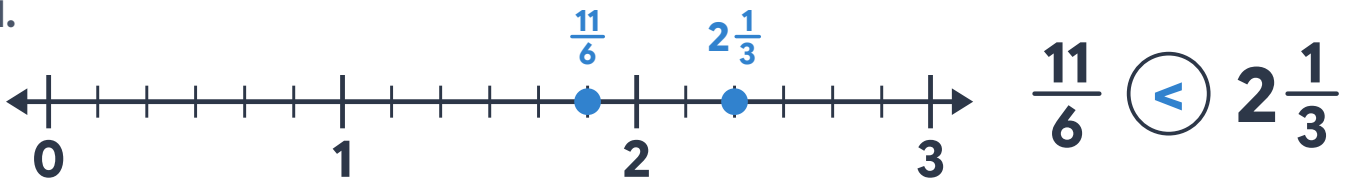
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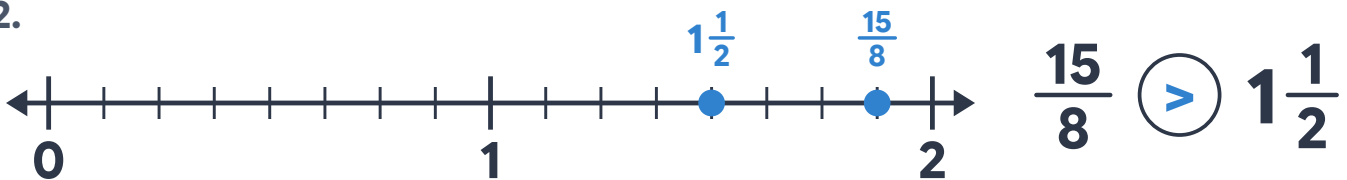
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Compare. Then explain how you know.

Example

$$2\frac{1}{4} < 2\frac{1}{3}$$

How I know: The wholes are the same.

$$\frac{1}{4} < \frac{1}{3}, \text{ so } 2\frac{1}{4} < 2\frac{1}{3}.$$

3.

$$3\frac{5}{8} > 2\frac{7}{8}$$

How I know: 3 wholes is more than 2

$$\text{wholes, so } 3\frac{5}{8} > 2\frac{7}{8}.$$

4.

$$\frac{11}{4} > 2\frac{1}{2}$$

How I know: $\frac{11}{4} = 2\frac{3}{4}$, and $\frac{3}{4} > \frac{1}{2}$, so $\frac{11}{4}$

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

5.

$$1\frac{5}{6} < 1\frac{11}{12}$$

How I know: $\frac{5}{6} = \frac{10}{12}$, and $\frac{10}{12} < \frac{11}{12}$, so $1\frac{5}{6}$

$$< 1\frac{11}{12}.$$

Comparing Fractions

Order fractions from least to greatest. Solve the stories.

Write the numbers in order from least to greatest.

Example

$$\frac{1}{2}, \frac{3}{8}, \frac{2}{3}$$

$$\frac{3}{8} < \frac{1}{2} < \frac{2}{3}$$

$$1. \frac{2}{5}, \frac{3}{10}, \frac{1}{2}, \frac{4}{5}$$

$$\frac{3}{10} < \frac{2}{5} < \frac{1}{2} < \frac{4}{5}$$

$$2. 1\frac{1}{3}, \frac{5}{4}, 1\frac{1}{6}$$

$$1\frac{1}{6} < \frac{5}{4} < 1\frac{1}{3}$$

$$3. \frac{4}{5}, 0.7, \frac{3}{4}$$

$$0.7 < \frac{3}{4} < \frac{4}{5}$$

Solve. Then explain how you know.

Example

Maya ran $\frac{7}{8}$ mile. Leo ran $\frac{3}{4}$ mile. Who ran farther?

Answer: Maya.

Why: $\frac{3}{4} = \frac{6}{8}$, and $\frac{7}{8} > \frac{6}{8}$. So Maya ran farther.

4. A red ribbon is $\frac{3}{5}$ yard long. A blue ribbon is $\frac{3}{4}$ yard long. Which ribbon is longer?

Answer: The blue ribbon.

Why: Same numerator. Fourths are bigger than fifths, so $\frac{3}{4} > \frac{3}{5}$.

5. The pizzas are the same size. Ana ate $\frac{3}{8}$ of one, Ben ate $\frac{1}{3}$ and Eli ate $\frac{5}{12}$. Who ate the most? Who ate the least?

Answer: Most: Eli. Least: Ben.

Why: In 24ths: $\frac{3}{8} = \frac{9}{24}$, $\frac{1}{3} = \frac{8}{24}$, $\frac{5}{12} = \frac{10}{24}$. Eli ate the most, Ben the least.

6. Sam's plant is $2\frac{1}{2}$ inches tall. Kim's plant is $\frac{9}{4}$ inches tall. Whose plant is taller?

Answer: Sam.

Why: $2\frac{1}{2} = \frac{10}{4}$, and $\frac{10}{4} > \frac{9}{4}$. So Sam's plant is taller.