

North Penn School District
Elementary Math Parent Letter

Grade 3

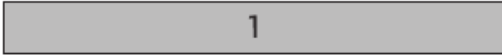
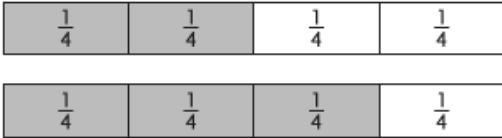
Unit 5 – Chapter 9: Compare Fractions

Examples for each lesson:

Lesson 9.1

Problem Solving • Compare Fractions

Nick walked $\frac{2}{4}$ mile to the gym. Then he walked $\frac{3}{4}$ mile to the store.
 Which distance is shorter?

Read the Problem	Solve the Problem
<p>What do I need to find? I need to find which distance is shorter.</p>	
<p>What information do I need to use? Nick walked $\frac{2}{4}$ mile to the gym. Then he walked $\frac{3}{4}$ mile to the store.</p>	
<p>How will I use the information? I will use <u>fraction strips</u> and <u>compare</u> the lengths of the models to find which distance is shorter.</p>	<p>Compare the lengths. $\frac{2}{4} < \frac{3}{4}$ The length of the $\frac{2}{4}$ model is less than the length of the $\frac{3}{4}$ model. So, the distance to the <u>gym</u> is shorter.</p>

More information on this strategy is available on Animated Math Model #35.

Lesson 9.2

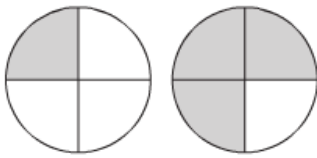
Compare Fractions with the Same Denominator

Pete's Prize Pizzas makes a special pizza. Of the toppings, $\frac{1}{4}$ is peppers and $\frac{3}{4}$ is ham. Does the pizza have more peppers or ham?

Compare $\frac{1}{4}$ and $\frac{3}{4}$.

Step 1 The denominators of both fractions are the same, 4. Use fraction circles divided into fourths to model the fractions.

Step 2 Shade 1 part of the first circle to show $\frac{1}{4}$.
Shade 3 parts of the second circle to show $\frac{3}{4}$.



Step 3 Compare. 3 parts is more than 1 part.

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

So, the pizza has more ham.

Lesson 9.3

Compare Fractions with the Same Numerator

Ryan takes a survey of his class. $\frac{1}{8}$ of the class has dogs, and $\frac{1}{3}$ of the class has cats. Are there more dog owners or cat owners in Ryan's class?

Compare the fractions. $\frac{1}{8} \bullet \frac{1}{3}$

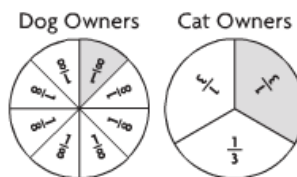
Step 1 Divide the first circle into 8 equal parts. Shade $\frac{1}{8}$ of the circle to show dog owners.

Step 2 Divide the second circle into 3 equal parts. Shade $\frac{1}{3}$ of the circle to show cat owners.

Step 3 Compare the shaded parts of the circles. Which shaded part is larger?

$$\frac{1}{3} \text{ is larger than } \frac{1}{8}. \quad \frac{1}{8} < \frac{1}{3}$$

So, there are more cat owners than dog owners in Ryan's class.



More information on this strategy is available on Animated Math Model #36.

Lesson 9.4

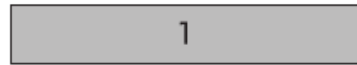
Compare Fractions

Mrs. Brown's recipe uses $\frac{2}{3}$ cup of flour. Mrs. Young's recipe uses $\frac{3}{4}$ cup of flour. Which recipe uses more flour?

Compare $\frac{2}{3}$ and $\frac{3}{4}$.

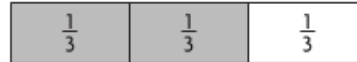
- You can compare fractions using fraction strips.

Step 1 Model each fraction.



Step 2 Compare the lengths of the models.

The length of the $\frac{3}{4}$ model is greater than the length of the $\frac{2}{3}$ model.



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

So, Mrs. Young's recipe uses more flour.

Compare $\frac{3}{6}$ and $\frac{4}{6}$. Which is greater?

- The denominators are the same, so compare the numerators.

$$3 < 4, \text{ so } \frac{3}{6} < \frac{4}{6}.$$

$$\text{So, } \frac{4}{6} \text{ is greater than } \frac{3}{6}. \quad \frac{4}{6} > \frac{3}{6}$$

More information on this strategy is available on Animated Math Model #35.

Lesson 9.5

Compare and Order Fractions

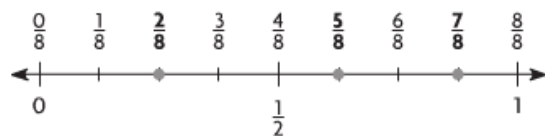
You can use a number line to compare and order fractions.

Order $\frac{5}{8}$, $\frac{2}{8}$, and $\frac{7}{8}$ from least to greatest.

Since you are comparing eighths, use a number line divided into eighths.

Step 1 Draw a point on the number line to show $\frac{5}{8}$.

Step 2 Repeat for $\frac{2}{8}$ and $\frac{7}{8}$.



Step 3 Fractions increase in size as you move right on the number line. Write the fractions in order from left to right.

So, the order from least to greatest is $\frac{2}{8}$, $\frac{5}{8}$, $\frac{7}{8}$.

Lesson 9.6

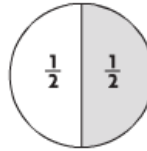
Model Equivalent Fractions

Equivalent fractions are two or more fractions that name the same amount.

You can use fraction circles to model equivalent fractions.

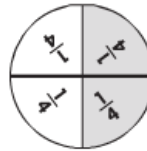
Find a fraction that is equivalent to $\frac{1}{2}$. $\frac{1}{2} = \frac{\square}{4}$

Step 1 Look at the first circle. It is divided into 2 equal parts. Shade one part to show $\frac{1}{2}$.



Step 2 Draw a line to divide the circle into 4 equal parts because 4 is the denominator in the second fraction.

Step 3 Count the number of parts shaded now. There are 2 parts out of 4 parts shaded.



$\frac{1}{2} = \frac{2}{4}$ So, $\frac{1}{2}$ is equivalent to $\frac{2}{4}$.

More information on this strategy is available on Animated Math Model #37.

Lesson 9.7

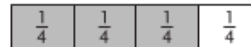
Equivalent Fractions

Kaitlyn used $\frac{3}{4}$ of a sheet of wrapping paper.

Find a fraction that is equivalent to $\frac{3}{4}$. $\frac{3}{4} = \frac{\square}{8}$

Step 1 The top fraction strip is divided into 4 equal parts.

Shade $\frac{3}{4}$ of the strip to show how much paper Kaitlyn used.



Step 2 The bottom strip is divided into 8 equal parts.

Shade parts of the strip until the same amount is shaded as in the top strip.

6 parts of the bottom strip are shaded.



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

So, $\frac{6}{8}$ is equivalent to $\frac{3}{4}$.

More information on this strategy is available on Animated Math Model #37.

Vocabulary

Equivalent – two or more sets that name the same amount

Equivalent fractions – two or more fractions that name the same amount

Equal to (=) – a symbol used to compare two numbers having the same amount or value

Greater than (>) – a symbol used to compare two numbers, with the greater number given first

Less than (<) – a symbol used to compare two numbers, with the lesser number given first