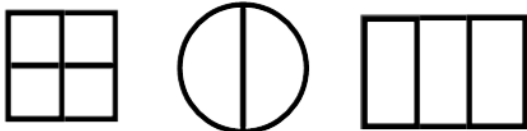


UNIT 6 GOALS:

- Partition shapes into parts with equal areas.
- Understand that fractional parts must be equal-sized.
- Understand that when a whole is partitioned into equal parts, the denominator represents the number of equal parts.
- Understand that the numerator of a fraction is the count of the number of equal parts being counted.
- Understand that as the number of equal pieces in the whole increases, the size of the fractional pieces decreases.
- Understand a fraction as a number on a number line.
- Explain the equivalence of fractions through reasoning and visual fraction models.
- Express whole numbers as fractions.
- Compare two fractions with the same numerator or the same denominator.
- Measure lengths using rulers marked with halves and fourths of an inch.

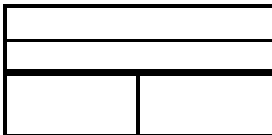
Representing Fractions

Students will understand how to partition shapes into equal areas.



Students will recognize that equal shares (areas) of identical wholes need not have the same shape.

Example: This rectangle has been divided into fourths. Each area is $\frac{1}{4}$ of the whole rectangle.



Images from Lafayette Parish School System

Unit 6 Vocabulary

Fraction – a number that names part of a whole or part of a set.

Fraction Bar – a visual representation of a whole partitioned into equal parts.

Numerator – the top number of a fraction that shows the number of equal parts counted.

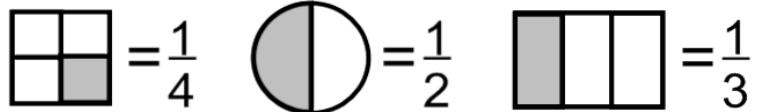
Denominator – the bottom number in a fraction that shows the total number of equal parts in the whole.

Unit Fraction – a fraction whose numerator is one.

Example $\frac{1}{4}$.

In the examples below students will understand that the numerator of a fraction is the count of the number of equal parts being counted and that the denominator represents the number of equal parts in the whole.

1 is the **numerator** for each of the fractions below:



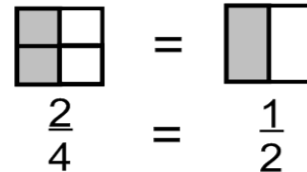
A fraction with a numerator of 1 is called a Unit Fraction.



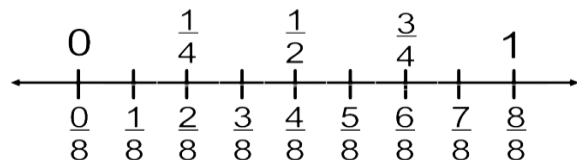
Equivalent Fractions

Students will explain equivalent fractions.

Below is an area model showing equivalent fractions.



Below is a number line model showing equivalent fractions.



Fractions on a Number Line

Students will understand a fraction as a number on a number line.



Students will also understand how to express a whole number as a fraction. A number line can be used to help develop this understanding.

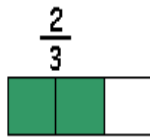
Using the number line below, write the whole numbers 1 through 4 as fractions.

$$1 = \frac{3}{3} \quad 2 = \frac{6}{3} \quad 3 = \frac{9}{3} \quad 4 = \frac{12}{3}$$

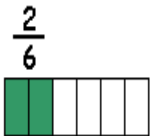


Students will understand that as the number of equal pieces in the whole increases, the size of the fractional pieces decreases.

In the first example below the whole has been partitioned into 3 equal areas with two of the areas shaded.



In the second example below, the same size whole is used. This time the whole is partitioned into 6 equal areas with two of the areas shaded.



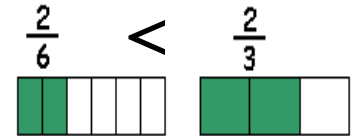
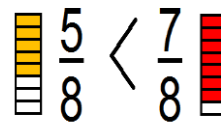
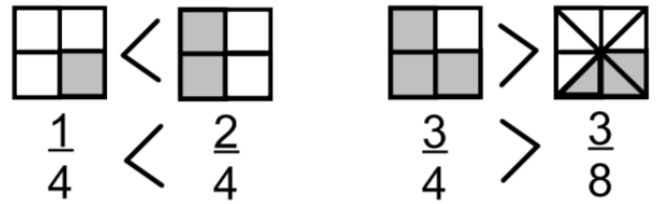
What do you notice about the two models?

- There are more pieces in the second model.
- The pieces in the second model are smaller than the pieces in the first model.
- There are fewer pieces in the first model.
- The pieces in the first model are larger than the pieces in the second model.

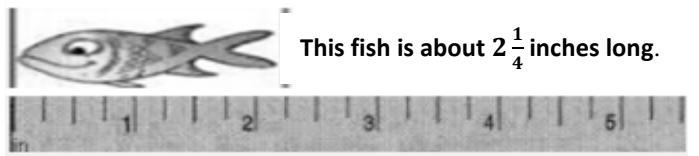
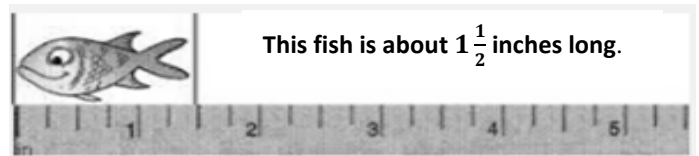
If this was an example of two same size cakes and you ate the cake shaded in first picture and a friend ate the cake shaded in the second picture, who ate the most cake? *You ate the most.*

Comparing Fractions

Students will compare two fractions with the same denominator or the same numerator through reasoning and visual fraction models.



Measure lengths to the nearest half or quarter of an inch.



Resource for Unit 6

