

Math News

3rd Grade Unit 7: Finding Fair Shares

Issue #4 of 5 – 3rd 9 Weeks

Our Learning Goals:

- Write and represent fractions up to 1 whole with denominators of 2, 3, 4, 6, and 8 using objects, pictures and number lines.
- Compose and decompose fractions into its unit fractions and explain what a unit fraction is.
- Explain why the pieces of a fraction are smaller if the denominator is a larger number. Explain why the pieces of a fraction are larger if the denominator is a smaller number.
- Represent equivalent fractions and explain how the two fractions are equivalent.

Vocabulary

Unit Fraction - A fraction that has a 1 as its numerator.

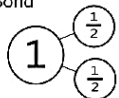
Benchmark Fractions – A very familiar fraction that can be referred to easily.

Equivalent Fractions – Two or more fractions that are the same amount of the whole or represent the same point on a number line.

Compose – Putting together smaller pieces or numbers, to create a larger number.

Decompose – Breaking a number down into its smaller pieces or numbers.

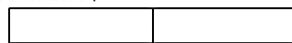
Number Bond



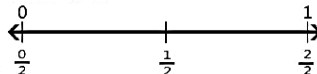
numerator → 2

4 ← denominator

Fraction Strip or Tape Diagram

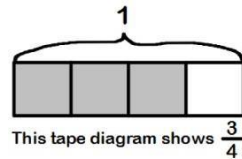


Number Line

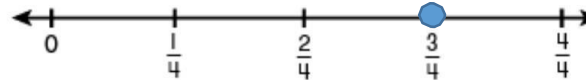
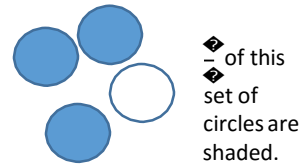


Fractional Representations

In 3rd grade, students will continue their understanding of fractions to include fractions of a whole, fractions of a number line and fractions of a set of objects.



$$\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$



The point on this number line represents $\frac{3}{4}$.

One way 3rd grade students determine the name of a fraction is counting by unit fractions. This strategy is also helpful to learn the fractional sequence so they can label number lines.



Think: $\frac{1}{3}, \frac{2}{3}, \frac{3}{3}$

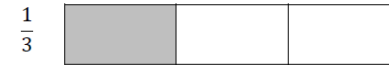
Or $\frac{1}{3}, \frac{2}{3}, 1 \text{ whole}$

How Will My Child be Assessed?

Students will be assessed informally and formally throughout the unit with opportunities to learn from their peers and their own mistakes. An assessment will be given at the end of the unit with both open ended and multiple choice questions.

Reasoning About Fractions

Which fraction has a larger shaded piece? Explain your thinking.



Justin described his thinking like this: *They both have one piece shaded. If I share the cake with 2 people, the pieces are bigger than if I share with 3 people. So $\frac{1}{2}$ has one bigger piece and $\frac{1}{3}$ has one littler piece.*

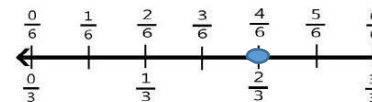
Which fraction has a smaller shaded amount? Explain.



Katina explained her thinking like this: *They both have the same number of pieces colored in but the sevenths are smaller pieces.*

Equivalent Fractions

In the beginning of the unit, students will explore the relationship between thirds and sixths, and halves, fourths and eighths.



Sarah explained it like this: *To make sixths, you just have to cut the thirds in half.*

Jimmy explained it like this: *If you mark your thirds on the number line, you can find the sixths easy. Just put a line in the middle of each third.*