

Unit 7: Chapter 8 & 9 Fractions

Content Area: **Mathematics**
Course(s): **Math 3**
Time Period: **March**
Length: **5 weeks**
Status: **Published**

Unit Summary

In this unit, students will develop an understanding of fractions as numbers. Students will compare fractions with the same denominator and numerator. They will identify fractions with equivalent values.

Standards

MA.3.NF.A	Develop understanding of fractions as numbers.
MA.3.NF.A.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
MA.3.NF.A.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram.
MA.3.NF.A.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
MA.3.NF.A.2a	Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.
MA.3.NF.A.2b	Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
MA.3.NF.A.3a	Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
MA.3.NF.A.3b	Recognize and generate simple equivalent fractions (e.g., $1/2 = 2/4$, $4/6 = 2/3$). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
MA.3.NF.A.3c	Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.
MA.3.NF.A.3d	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.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.K-12.8	Look for and express regularity in repeated reasoning.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and

synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Student Learning Objectives

Students will learn how to determine fractions, compare fractions and identify fractions with equivalent value.

Essential Questions

What are fractions and how will I use them in real life?

What are the parts of a fraction?

How are models used to show how fractional parts are combined or separated?

How are numbers that represent fractional parts compared?

How can models be used to compare fractions with like and unlike denominators?

Enduring Understandings

Students will understand that:

- a fraction represents a relationship between two numbers.
- different combinations of fractions are equivalent to other combinations or to the whole.
- fractions can represent quantities greater than one.

Application

Students will be able to independently use their learning to:

- determine why you need to have equal parts for fractions.
- determine how fractions will help you to describe amounts.
- determine how can you solve problems that involve fractions.

Skills

Students will be skilled at:

- discussing a fraction using the terms "numerator" and "denominator"
- writing a fraction for the part of a circle that is white shaded
- completing a number line with missing fractions
- finding missing numbers to make an equivalent fraction
- defining the term equivalent as having the same value
- determining whether two fractions are equivalent
- using circles to compare equivalent fractions

- writing a fractions for a shaded part
- comparing two fractions as greater than, less than or equal
- identifying fractions using models