# Unit 3 Chapter 06 Add/Subtract Fractions

Content Area: **Mathematics**
Course(s): **Math 5**
Time Period: **November**
Length: **MP 1-2**
Status: **Published**

## Unit Summary

In Unit 3, students will learn to add and subtract fractions and mixed numbers with unlike denominators using models and/or equations to represent the problem. They will use benchmark fractions to estimate sums and differences, and they will find equivalent fractions with common denominators. Students will also use patterns to write a rule to describe a sequence of fractions.

## Standards

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| MA.5.NF.A.1 | Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. |
| MA.5.NF.A.2 | Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. |
| TECH.8.1.5.A.1 | Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. |
| TECH.8.1.5.A.CS1 | Understand and use technology systems |
| TECH.8.1.5.A.CS2 | Select and use applications effectively and productively. |

## Student Learning Objectives

Students will learn to

- use models to add fractions with unlike denominators.
- use models to subtract fractions with unlike denominators.
- make reasonable estimates of fractions sums and differences.
- find a common denominator or at least common denominator to write a equivalent fractions.
- use equivalent fractions to add and subtract fractions.
- add and subtract mixed numbers with unlike denominators.
- rename to find the differences of two mixed numbers.
- identify, describe, and create numeric patterns with fractions.
- solve problems using the strategy work backward.
- add fractions and mixed numbers with the unlike denominators using the properties.

## Essential Questions

- How can you add and subtract fractions with unlike denominators?

- How can you use models to add fractions that have different denominators?
- How can you use models to subtract fractions that have different denominators?
- How can you make reasonable estimates of fraction sums and differences?
- How can you add and subtract mixed numbers with unlike denominators?
- How can you use a common denominator to add and subtract fractions with unlike denominators?
- How can you add and subtract mixed numbers with unlike denominators?
- How can you use renaming to find the difference of two mixed numbers?
- How can you use addition or subtraction to describe a pattern or create a sequence with fractions?
- How can the strategy *work backward* help you solve a problem with fractions that involves addition and subtraction?

## Enduring Understandings

Students will understand that:

- computational fluency includes understanding not only the meaning, but also the appropriate use of numerical operations.
- the magnitude of numbers affects the outcome of operations on them.
- in many cases, there are multiple algorithms for finding mathematical solution, and those algorithms are frequently associated with different cultures.
- context is critical when using estimation.

## Application

Students will be able to independently use their learning to:

- show equivalent forms of a given fraction, including improper fractions and mixed numbers.
- show equivalent forms of a given fraction when adding unit fractions and mixed numbers when presented horizontally and vertically.
- show equivalent forms of a given fraction when subtracting unit fractions and mixed numbers when regrouping is required and when presented horizontally and vertically.
- convert a mixed number to improper fractions and vice versa.
- make a list to find Greatest Common Factor or Least Common Multiple with up to three numbers up to 100.
- round to the nearest 1/2 and estimate answers to given equations.
- show all fractions in simplest form.

## Skills

Students will be skilled at:

- determining Greatest Common Factor (GCF) and Least Common Multiple (LCM).
- adding and subtracting unlike denominators.
- converting between mixed numbers and improper fractions.
- determining equivalent fractions.
- using fraction models of equations to represent word problems.
- estimating and assessing solutions to real-world problems involving fractions.