Lesson Notes 6.1

Module 6   Computational Fluency of Fractions
Lesson 1   Adding and Subtracting Fractions with
                   Like Denominators
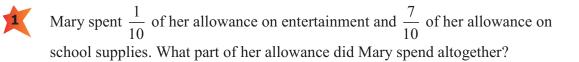
Lesson Objectives

- Model addition and subtraction of fractions with like denominators using diagrams and/or illustrations of manipulatives.
- Develop and use algorithms to add and to subtract fractions with like denominators.

Subtopic 1   Adding Fractions with Like Denominators

When two or more fractions have the same denominator, they have a **common denominator**. They have **like denominators**.

Adding Fractions with Like Denominators
• The denominator of the sum is the **common denominator** of the addends.
• The numerator of the sum is the sum of the **numerators** of the addends.
• Write the sum in **simplest form**.

1 Mary spent $\frac{1}{10}$ of her allowance on entertainment and $\frac{7}{10}$ of her allowance on school supplies. What part of her allowance did Mary spend altogether?

$$\frac{1}{10}+\frac{7}{10}=\frac{8}{10}=\frac{8\div 2}{10\div 2}=\frac{4}{5}$$

Mary spent $\frac{4}{5}$ of her allowance.

2 Lacy's pepper plant grew $\frac{7}{16}$ inch last week and $\frac{13}{16}$ inch this week. How much did her pepper plant grow in both weeks?

$$\frac{7}{16}+\frac{13}{16}=\frac{20}{16}=1\frac{4}{16}=1\frac{4\div 4}{16\div 4}=1\frac{1}{4}$$

Lacy's pepper plant grew $1\frac{1}{4}$ inches in both weeks.

Subtracting Fractions with Like Denominators

Subtracting Fractions with Like Denominators
- The denominator of the difference is the **common denominator**.
- The numerator of the difference is the difference of the **numerators** of the fractions being subtracted.
- Write the difference in **simplest form**.

Subtract.

3. $\dfrac{11}{14} - \dfrac{3}{14}$

$$\dfrac{11}{14} - \dfrac{3}{14} = \dfrac{8}{14} = \dfrac{8 \div 2}{14 \div 2} = \dfrac{4}{7}$$

4. The distance of a straight line path from Dora's house to school is $\dfrac{7}{8}$ mile. Dora leaves her house to walk to school. She walks $\dfrac{1}{8}$ mile of the path. How much farther does Dora have to walk on the path to get to school?

$$\dfrac{7}{8} - \dfrac{1}{8} = \dfrac{6}{8} = \dfrac{6 \div 2}{8 \div 2} = \dfrac{3}{4}$$

Dora needs to walk $\dfrac{3}{4}$ mile.