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Module 6 Computational Fluency of Fractions
Lesson 3 Subtracting Fractions with Unlike Denominators

Lesson Objectives

- Find equivalent fractions.
- Model subtraction of fractions with unlike denominators using diagrams and/or illustrations of manipulatives.
- Develop and use algorithms to subtract fractions with unlike denominators.

Subtopic 1 Model Subtracting Fractions with Unlike Denominators

Solve using a model.

- 1** When Lakisha left for her trip, her gas tank was $\frac{7}{10}$ full. She used $\frac{3}{5}$ tank of gas before stopping for dinner. What fraction of a tank is left?



There is $\frac{1}{10}$ of a tank left.

- 2** Roderick buys $\frac{5}{6}$ pound of cherries. He eats $\frac{1}{2}$ pound. What part of a pound of cherries does he have left?



$$\frac{5}{6} - \frac{1}{2} = \frac{5}{6} - \frac{3}{6} = \frac{5-3}{6} = \frac{2}{6} = \frac{1 \cdot \cancel{2}^1}{3 \cdot \cancel{2}_1} = \frac{1}{3}$$

Roderick has $\frac{1}{3}$ pound of cherries left.

Subtopic 2**Subtracting Fractions Using the LCM/LCD****Subtract Fractions with Unlike Denominators**

- To subtract fractions that have unlike denominators, write equivalent fractions using a **common denominator**.
- Then, subtract.
- Write the answer in **simplest** form.

3

Benjamin needs $\frac{3}{4}$ gallon of paint to finish painting his room. He only has $\frac{2}{5}$ gallon. How much more paint does he need?

$$\begin{array}{r} \frac{3}{4} - \frac{2}{5} \\ \frac{3 \cdot 5}{4 \cdot 5} - \frac{2 \cdot 4}{5 \cdot 4} \\ \frac{15}{20} - \frac{8}{20} \\ \frac{15 - 8}{20} \end{array}$$

Benjamin needs $\frac{7}{20}$ gallon of paint.

4

Sondra has $\frac{5}{6}$ yard of string. She uses $\frac{1}{3}$ yard of the string to tie up papers for recycling. How much string does Sondra have left?

$$\begin{array}{r} \frac{5}{6} - \frac{1}{3} \\ \frac{5}{6} - \frac{1 \cdot 2}{3 \cdot 2} \\ \frac{5}{6} - \frac{2}{6} \\ \frac{5 - 2}{6} \\ \frac{3}{6} \\ \frac{1}{2} \end{array}$$

Sandra has $\frac{1}{2}$ yard of string left.