

Lesson 12: Solve Problems

Standards Alignments

Addressing 5.NF.A.1, 5.NF.A.2

Teacher-facing Learning Goals

- Solve problems involving addition and subtraction of fractions with unlike denominators.

Student-facing Learning Goals

- Let's solve more problems by adding and subtracting fractions with unlike denominators.

Lesson Purpose

The purpose of this lesson is for students to solve problems that involve adding and subtracting fractions with unlike denominators.

In this lesson, students apply their understanding of fraction addition and subtraction to solve multi-step problems. They work with fractions and mixed numbers and make estimates as well as finding the value of sums and differences. Students find the sums and differences in a way that makes sense to them. They will choose common denominators and can also use techniques they have seen in earlier lessons such as adding on to make a whole number.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR6 (Activity 1)

Instructional Routines

Estimation Exploration (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min

Teacher Reflection Question

What strategies did most students use to add and subtract fractions today? What strategies did you anticipate? Which did you not anticipate?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Evaluate Expressions

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Student-facing Task Statement

1. Priya hiked $1\frac{2}{3}$ miles. Diego hiked $\frac{1}{2}$ mile. How much farther did Priya hike than Diego? Explain or show your reasoning.
2. On Monday, Andre hiked $\frac{3}{4}$ mile in the morning and $1\frac{1}{3}$ miles in the afternoon. How far did Andre hike on Monday? Explain or show your reasoning.

Student Responses

1. $1\frac{1}{6}$ miles or equivalent. $1\frac{2}{3} - \frac{1}{2} = \frac{5}{3} - \frac{1}{2}, \frac{5}{3} - \frac{1}{2} = \frac{10}{6} - \frac{3}{6} = \frac{7}{6} = 1\frac{1}{6}$
2. $2\frac{1}{12}$ miles or equivalent. $\frac{3}{4} + 1\frac{1}{3} = \frac{9}{12} + \frac{16}{12} = \frac{25}{12} = 2\frac{1}{12}$