

Lesson 9: Differences of Fractions

Standards Alignments

Addressing 4.NF.B.3.a, 4.NF.B.3.c

Teacher-facing Learning Goals

- Reason about subtraction of fractions with the same denominator using a number line.

Student-facing Learning Goals

- Let's explore differences of fractions on a number line.

Lesson Purpose

The purpose of this lesson is for students to use a number line to reason about subtraction of fractions with the same denominator.

Previously, students decomposed fractions into sums of other fractions and wrote equations to record the decompositions. They also used number lines to reason about addition of fractions with the same denominator. In this lesson, students use number lines to think about differences of fractions with the same denominator. They also practice reasoning about equivalence and decomposing fractions (including mixed numbers) mentally to facilitate subtraction.

As in earlier grades, students may think about subtracting as taking away a number from another number, or as finding an unknown addend. The way they represent differences of fractions on a number line may vary accordingly.

Access for:

Students with Disabilities

- Engagement (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

True or False (Warm-up)

Materials to Copy

- Make a Jump, Subtraction Edition (groups of 2): Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

Based on students' work today, what did you learn about their understanding of the relationships between addition and subtraction? How will you use these insights to prepare for upcoming work?

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

 5 min

Differences of Fifths

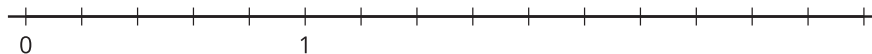
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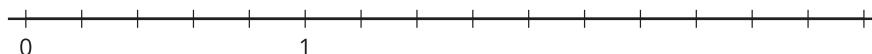
Student-facing Task Statement

Use a number line to represent each difference and to find its value.

1. $\frac{12}{5} - \frac{4}{5}$

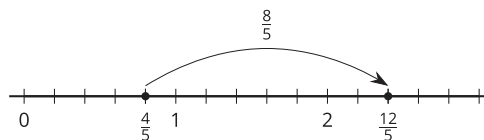
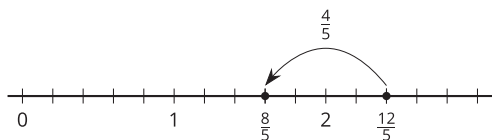


2. $2\frac{1}{5} - \frac{7}{5}$



Student Responses

1. $\frac{12}{5} - \frac{4}{5} = \frac{8}{5}$ or $\frac{12}{5} - \frac{4}{5} = 1\frac{3}{5}$. Sample responses:



2. $2\frac{1}{5} - \frac{7}{5} = \frac{4}{5}$. Sample responses:

