

Lesson 3: Same Denominator or Numerator

Standards Alignments

Building On	3.NF.A.3.d
Addressing	4.NF.A.2
Building Towards	4.NBT.B.4, 4.NF.A.2

Teacher-facing Learning Goals

- Compare fractions with the same numerator or the same denominator using physical or visual representations.
- Use the meaning of numerator and denominator to reason about the size of fractions.

Student-facing Learning Goals

- Let's compare fractions with the same numerator or the same denominator.

Lesson Purpose

The purpose of this lesson is for students to use the meaning of numerator and denominator and to compare fractions with the same numerator or the same denominator.

In this lesson, students reason about the relative size of fractions based on the meaning of numerator and denominator, and use fraction strips to support their reasoning.

Students first compare pairs of fractions with the same denominator. They recall that fractions with the same denominator are composed of the same unit fractions or have parts that are the same size, so the numerators can tell us how the fractions compare: the greater the numerator, the greater the fraction.

Next, students compare fractions with the same numerator. They recognize that we cannot simply look at the denominators and see which is greater. Because the denominator tells us the number of parts in 1 whole, the greater that number, the smaller the fractional part.

Access for:

Students with Disabilities

- Engagement (Activity 1)

Instructional Routines

MLR1 Stronger and Clearer Each Time (Activity 2), Number Talk (Warm-up)

Lesson Timeline

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

Teacher Reflection Question

Most students may find it more intuitive to compare fractions with a common denominator than those with a common numerator. Did you see students who grasp both equally well? How did they conceptualize the latter?

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

 5 min

Sizing Up Fractions

Standards Alignments

Addressing 4.NF.A.2

Student-facing Task Statement

In each pair of fractions, which one is greater? Explain or show your reasoning.

1. $\frac{7}{8}$ or $\frac{10}{8}$
2. $\frac{4}{10}$ or $\frac{4}{5}$

Student Responses

1. $\frac{10}{8}$ is greater. Sample reasoning: The two fractions have the same fractional parts (eighths). There are more eighths in $\frac{10}{8}$ than in $\frac{7}{8}$.
2. $\frac{4}{5}$ is greater. A fifth is greater than a tenth, so 4 fifths are greater than 4 tenths.