## Lesson 12: Ways to Compare Fractions

## Standards Alignments

| Building On | 3.NF.A. 1 |
| :--- | :--- |
| Addressing | 4.NF.A. 2 |
| Building Towards | 4.NF.A. 2 |

## Teacher-facing Learning Goals

- Compare fractions using methods that make sense to them.


## Student-facing Learning Goals

- Let's compare some fractions.


## Lesson Purpose

The purpose of this lesson is for students to compare fractions in a way that makes sense to them, including by reasoning about the size of fractional parts, common numerators or denominators, or relationships to benchmarks such as $\frac{1}{2}$ and 1 .

Previously, students have investigated the relative sizes of fractions with the same numerator or denominator. They have also compared fractions to $\frac{1}{2}$ and 1 . In this lesson, they apply those understandings to compare a wider range of fractions.

Some students may make comparisons by writing equivalent fractions, which shows they are applying learning from earlier in the unit. It is not necessary to highlight this approach at this point, however. In the next lesson, students will take a closer look at how equivalence can be used to compare fractions.

## Access for:

## (ta) Students with Disabilities

- Engagement (Activity 1)
© English Learners
- MLR8 (Activity 2)


## Instructional Routines

Estimation Exploration (Warm-up)
Materials to Gather

- Colored pencils: Activity 2

| 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

Which questions did you ask today that were effective in prompting students to compare the size of fractions strategically or structurally? Which ones might have pushed them toward a particular method or process?

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

Pick the Greater Fraction

## Standards Alignments

Addressing 4.NF.A. 2

## Student-facing Task Statement

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

1. $\frac{5}{12}$ and $\frac{5}{8}$
2. $\frac{11}{10}$ and $\frac{18}{100}$
3. $\frac{6}{10}$ and $\frac{7}{12}$

## Student Responses

1. $\frac{5}{8}$. Sample reasoning: 1 eighth is greater than 1 twelfth, so 5 eighths is greater than 5 twelfths.
2. $\frac{11}{10}$. Sample reasoning: $\frac{11}{10}$ is greater than 1 , and $\frac{18}{100}$ is less than 1 .
3. $\frac{6}{10}$. Sample reasoning: $\frac{7}{12}$ is $\frac{1}{12}$ more than $\frac{1}{2}$, and $\frac{6}{10}$ is $\frac{1}{10}$ more than $\frac{1}{2} \cdot \frac{1}{10}$ is greater than $\frac{1}{12}$, so $\frac{6}{10}$ is greater.
