Unit 2, Lesson 16

Compare and Order Fractions

Let's put some fractions in order.

Warm-up

Number Talk: Multiples of 6 and 12

Find the value of each expression mentally.

- 5×6
- 5×12
- 6×12
- 11×12

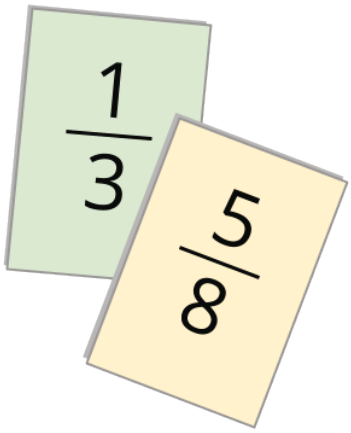
Activity 1

Introduce Compare—Fractions

Play *Compare Fractions* with 2 players:

- Split the deck between the players.
- Each player turns over 1 card.
- Compare the 2 fractions. The player with the greater fraction keeps both cards.
- If the fractions are equivalent, each player turns over 1 more card. The player with the greater fraction keeps all 4 cards.
- Play until you run out of cards. The player with the most cards at the end of the game wins.

fraction cards



Play *Compare Fractions* with 3 or 4 players:

- The player with the greatest fraction wins the round.
- If 2 or more players have the greatest fraction (equivalent fractions), those players turn 1 more card over. The player with the greatest fraction keeps all the cards.

Record any sets of fractions that are challenging to compare here.

_____ and _____ _____ and _____

_____ and _____ _____ and _____

Activity 2

Fractions in Order

Put each set of fractions in order, from least to greatest. Be prepared to explain your reasoning.

1. $\frac{3}{12}$ $\frac{2}{4}$ $\frac{2}{3}$ $\frac{1}{8}$

2. $\frac{8}{5}$ $\frac{5}{6}$ $\frac{11}{12}$ $\frac{11}{10}$

3. $\frac{21}{20}$ $\frac{9}{10}$ $\frac{6}{5}$ $\frac{101}{100}$

4. $\frac{5}{8}$ $\frac{2}{5}$ $\frac{3}{7}$ $\frac{3}{6}$

Section C Summary

We compared fractions using:

- What we know about the size of fractions.
- Benchmark fractions, such as $\frac{1}{2}$ and 1.
- Equivalent fractions.

Example: To compare $\frac{3}{8}$ and $\frac{6}{10}$, we can reason that:

- $\frac{4}{8}$ is equivalent to $\frac{1}{2}$, so $\frac{3}{8}$ is less than $\frac{1}{2}$.
- $\frac{5}{10}$ is equivalent to $\frac{1}{2}$, so $\frac{6}{10}$ is greater than $\frac{1}{2}$.
- This means that $\frac{6}{10}$ is greater than $\frac{3}{8}$. (Or $\frac{3}{8}$ is less than $\frac{6}{10}$.)

We can also compare by writing equivalent fractions with the same denominator, or a **common denominator**. For example, to compare $\frac{3}{4}$ and $\frac{4}{6}$, we can use 12 as the denominator:

$$\frac{3}{4} = \frac{9}{12} \qquad \frac{4}{6} = \frac{8}{12}$$

Because $\frac{9}{12}$ is greater than $\frac{8}{12}$, we know that $\frac{3}{4}$ is greater than $\frac{4}{6}$.