PUZZLE TALK

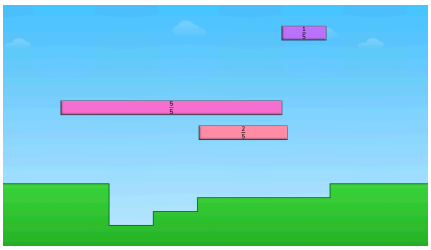
Fourth Grade | **Fraction Equivalence and Ordering** | **Fraction Order Fill**

Materials

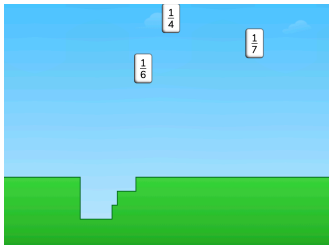
whiteboards, dry erase markers
fraction tools such as number lines, Cuisenaire rods, fraction strips, etc

Directions

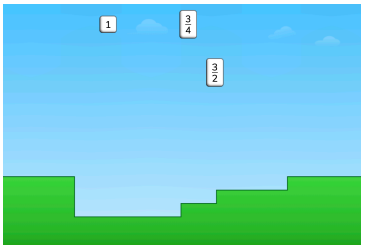
- Give students whiteboards, dry erase markers and fraction tools, such as number lines, Cuisenaire rods, fraction strips, etc. Display the first puzzle in Level 1 that does not have JiJi's Helping Hand. Ask students, "What do you notice? How do you think we solve this puzzle?"



- Ask students, "What do you notice about the three fractions shown? How are they the same? How are they different?" Discuss the role of the numerator and denominator. Say to students, "If all of these fractions have the same denominator, how can we use the numerator to compare them?"
- Have students Think, Pair, Share with a partner and record the order of the fractions from least to greatest on their whiteboards. Try a student's solution and watch the feedback.
- Pause the puzzle before JiJi crosses the screen. Say to students, "How could we represent our solution to this puzzle using a number sentence?" Model how to write a number sentence using <, > and/or =.
- Repeat with the remaining puzzles in Level 1.



- Display the first puzzle in Level 2.
- Ask students, "What do you notice about the three fractions shown? How are they the same? How are they different?" Discuss the role of the numerator and denominator. Say to students, "If all of these fractions have the same numerator, how can we use the denominator to compare them?"
- Have students Think, Pair, Share with a partner and record the order of the fractions from least to greatest on their whiteboards. Try a student's solution and watch the feedback.
- Pause the puzzle before JiJi crosses the screen. Say to students, "How could we represent our solution to this puzzle using a number sentence?" Model how to write a number sentence using <, > and/or =. Repeat with the remaining puzzles in Level 2.



- Display the first puzzle in Level 3. Ask students what they notice about the fractions in the puzzle. Ask students, "How can you compare fractions with different denominators?"
- Have students use their tools to order the fractions. Discuss students' strategies (e.g., Did they change the 1 to a fraction? Represent the fraction with a denominator of 1? Did they make a model to find a common denominator?).
- Repeat with the remaining puzzles in Level 3.

Sample Questions

- What do you know about the three fractions in this puzzle?
- How can you use the numerator to help compare these fractions?
- How can you use the denominator to help compre the fractions?
- How can you represent your solution to this puzzle using a number sentence?
- How can you compare fractions with unlike denominators?
- How can you represent 1 as a fraction?

What to look for

How does the student:

- discuss the role of the numerator to compare fractions and order them from least to greatest?
- discuss the role of the denominator to compare fractions and order them from least to greatest?
- represent the solution by writing a number sentence?
- Compare fractions with unlike denominators?
- explain their strategy for finding a common denominator?
- represent 1 as a fraction?