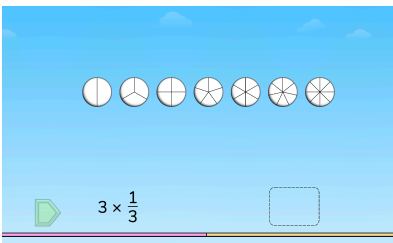
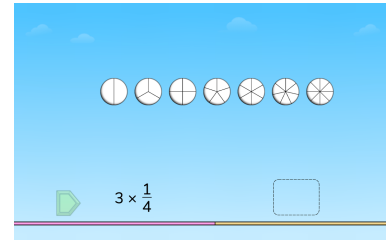


Materials

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

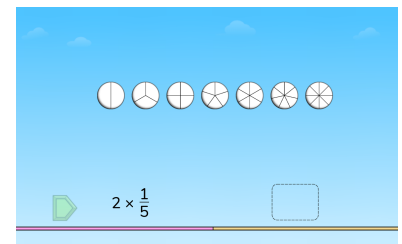
- Give students whiteboards, dry erase markers and fraction tools, such as number lines, Cuisenaire rods, fraction strips, etc. Display the first puzzle in Level 1 that does not have JiJi's Helping Hand. Ask students, "What do you notice? How do you think we solve this puzzle?"
- Have students Think, Pair, Share their ideas. Say to students, "What is happening in this equation? How can we use what we know about multiplication of whole numbers to solve this problem?"
- Move the cursor over the fraction circles at the bottom and ask students, "Which denominator should we choose? How do you know?" Share students' thinking.



- Choose the correct denominator and then ask, "How many shaded equal parts do we need in all? Why?" Connect the multiplication number sentence to a repeated addition number sentence. Say to students, "If this problem says we have ___ groups of ___, how many total pieces do we need?"
- Move the cursor over the shaded pieces and count the pieces needed. Before clicking to solve the puzzle, ask students to record the solution as an equation on their whiteboards (e.g., $3 \times 1/3 = 3/3$).
- Repeat with the remaining puzzles in Level 1.

Directions

- Display the first puzzle in Level 2. Ask students, "How is this puzzle different from the ones we just did?" Choose the denominator together and then move the cursor over the shaded pieces and count the pieces needed.
- Before clicking to solve the puzzle, ask students, "What do you notice about the fraction that is out answer? What does it tell us if the numerator is bigger than the denominator?"
- Ask students to record the solution as an equation on their whiteboards (e.g., $2 \times 3/4 = 6/4$). Ask students to record the solution as both a fraction and a mixed number. Have students write the solution as both a fraction and a mixed number. Have students explain why the fraction and mixed number are equal.
- Repeat with the remaining puzzles in Level 2.


Sample Questions

- What does the numerator represent?
- What does the denominator represent?
- How many total equal pieces do we have?
- How do we write the solution as a fraction? As a mixed number?
- How is multiplying fractions similar to multiplying whole numbers?
- How is multiplication related to repeated addition?

What to look for

- How does the student:
- determine the number of partitions (denominator) needed in the pies?
 - determine how many shaded equal pieces to select?
 - write an equation to represent the puzzles?
 - write the solution as a fraction and mixed number?
 - understand the relationship between addition and multiplication?