

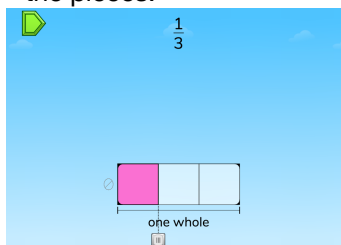
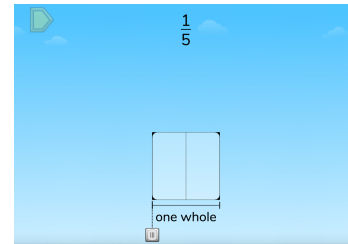


Materials

whiteboards and dry erase markers

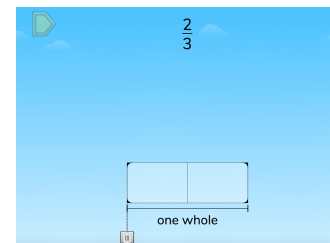
Directions

- Display the first puzzle in Level 1. Ask students, “What do you see? How do you think we solve this puzzle?” Have students turn and talk to a neighbor about the puzzle.
- Move the cursor across the square at the bottom and ask students to watch the animation. Ask students, “How many pieces do you want to partition this square into so that it matches the fraction in the puzzle?”
- Remind students that the denominator tells how many equal pieces the whole has been divided into. Point to the denominator on the fraction in the puzzle and say to students, “The denominator is ____, so we need to divide the square into ____ equal parts.” Select the correct denominator.
- Remind students that the numerator counts how many of the equal pieces you have. The numerator in the puzzle is 1, which means that we just need 1 of the pieces. Ask students, “How could we represent just 1 of the pieces?” Move the cursor over the square again to show how to shade in the pieces.



- Solve the puzzle and watch the feedback.
- Display the next puzzle and move the cursor along the square again. Ask students, “What do you notice about the size of the fraction pieces as I move the cursor to the left and right? What happens to the size of the fraction pieces as I cut the square into more pieces?”
- Have students turn and talk to a neighbor. Share students’ thinking. Prove that the bigger the denominator gets, the smaller the fraction pieces become.
- Solve a few more puzzles in Level 1.

- Display the first puzzle in Level 2. Say to students, “How is this puzzle different from the other puzzles we solved? How could we represent a fraction that does NOT have a numerator of 1?”
- Have students Think, Pair, Share with a partner. Share students’ thinking and solutions.
- Try a student solution and watch the feedback. Remind students that the numerator counts how many of the equal pieces you have, so a numerator of 4, for example, means that you have 1, 2, 3, 4 of the fraction pieces.
- Ask students, “How many of these fraction pieces does it take to make the whole? Why?”
- Solve the remaining puzzles in Level 2.



Sample Questions

- What does the numerator represent?
- What does the denominator represent?
- What happens to the size of the fraction pieces as the denominator gets bigger?
- How many halves/thirds/fourths/fifths/sixths does it take to make 1 whole? Why?

What to look for

- How does the student:
- discuss the size and number of partitions created as the cursor moves from left to right?
 - discuss the meaning of the denominator in the fractions?
 - discuss the meaning of the numerator in the fractions?
 - discuss unit fractions and count by unit fractions?