

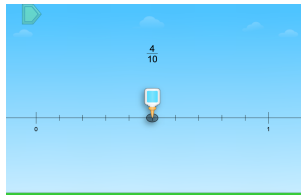
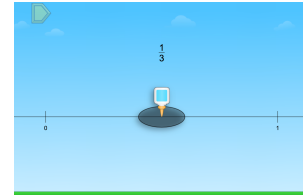


Materials

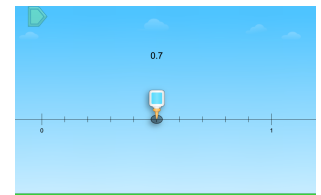
whiteboards and dry erase markers

Directions

- Gives students whiteboards and dry erase markers. Display the first puzzle in Level 1. Say to students, “What do you see?” Have students turn and talk to a neighbor about what they see in the puzzle.
- Ask students, “What do you know about the fraction in the sky? What do you notice about the number line? Where do you think you would place this fraction on the number line?”
- Have students Think, Pair, Share solutions with a neighbor and record their solutions on their whiteboards. Try a student’s solution and watch the feedback.
- Repeat with a few more puzzles in Level 1.



- Display the first puzzle in Level 2 with a denominator of 100. Say to students, “What do you notice about the denominator of this fraction and the tick marks on the number line?”
- Ask students to talk with a neighbor about where to place the fraction now that the number line is not partitioned into a number of parts equal to the denominator.
- Share students’ thinking. Try a student’s solution and watch the feedback. Pause the feedback and discuss the number of bars between the tick marks for 10ths and 100ths.
- Ask students, “What do we know about the relationship between 10ths and 100ths? How do they compare? How many tenths does it take to make 1? How many hundredths? How many hundredths does it take to make 1/10?”
- Solve a few more puzzles in Level 2.
- Display the first puzzle in Level 3 that has a decimal to the tenths place. Ask students, “How is this puzzle different from the other puzzles we have solved? What do you know about the number in the sky?”
- Have students Think, Pair, Share solutions with a neighbor and record their solutions on their whiteboards. Try a student’s solution and watch the feedback. Ask students, “How is this decimal related to this fraction? How could you write this decimal as a fraction?”
- Solve a few more puzzles that have a decimal to the tenths place.
- Display a puzzle that has a decimal to the hundredths place. Ask students, “Where do you think this fraction should be placed? How do you know?” Have students record their solution on their whiteboards.
- Try a student’s solution and watch the feedback. Ask students, “How is this decimal related to this fraction?” Solve the remaining puzzles in Level 3.



Sample Questions

- What do you know about the number in the sky?
- How is the number line partitioned?
- How did you determine where to place the number on the number line?
- How are fractions and decimals related?
- How do tenths and hundredths compare?
- How many tenths are needed to make 1?
- How many hundredths are needed to make 1?

What to look for

- How does the student:
- determine where to place a fraction on a number line?
  - determine where to place a decimal on a number line?
  - explain the relationship between tenths and hundredths?
  - write decimal and fraction forms of a number?