🐧 PUZZLE TALK

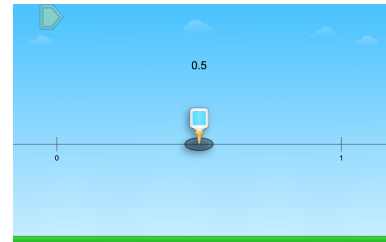| **Fifth Grade**	**Fraction and Decimal Concepts**	**Fraction Decimal Trap**

Materials

White board and dry erase markers for each student

Directions

- Give students whiteboards and dry erase markers. Display the first puzzle in Level 2. Ask students, "What do you notice? How do you think we solve this puzzle?" Have students discuss, first with a partner and then as a whole group, what they notice. Discuss solution strategies.
- Solve both parts of the first puzzle, but pause the puzzle before JiJi crosses the screen the second time. Discuss how the number line is partitioned.
- Compare the puzzles showing a fraction to the puzzles showing decimals. Write an equation to show how the two are equal (e.g., 5/10 = 0.5). Ask students to use their whiteboard to prove that this equation is true.
- Solve a few more puzzles in Level 2. Focus on the relationship between fractions and decimals.
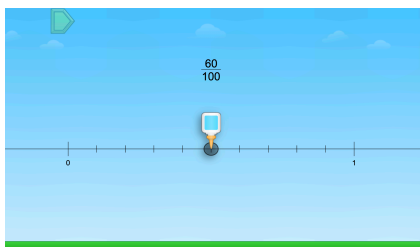
- Ask students, "What is different about this puzzle and the puzzles we just solved?" Discuss the number of bars between the tick marks for 10ths and 100ths and compare. Discuss how students determine where to place the fraction/decimal.
- Compare the puzzles showing a fraction to the puzzles showing decimals. Write an equation to show how the two are equal (e.g., 5/100 = 0.05). Ask students to use their whiteboard to prove that this equation is true.

- Show puzzles from Level 6.
- Discuss different student's strategies for locating the number on the number line.
- Continue to have students compare the fraction and decimal forms of the numbers.
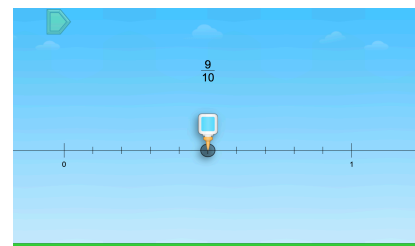
Sample Questions

- What does this show about the relationship between 10ths and 100ths?
- How do the decimal and the fraction compare?
- Where would 1.46 be located?

What to look for

How does the student:
- locate fraction form ($\frac{1}{10}$, $\frac{1}{100}$) and decimal form (0.1, 0.01) of numbers on a number line labeled 0 to 1 with tick marks for every tenth.
- compare fraction and decimal forms of numbers.
- recognize that there are 10 hundredths for every tenth ($0.01 \times 10 = 0.1$).