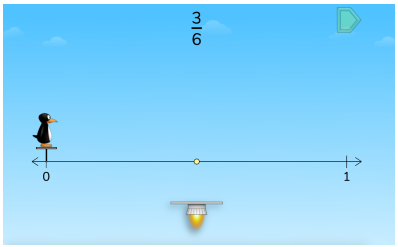
PUZZLE TALK

Fifth Grade	Fractions on the Number Line	Estimate Fractions on the Number Line

Materials

Fraction Number Lines game mats (back to back in sheet protector)
dry erase markers, 0 - 6/3 number line

Directions



- Give students the Fraction Number Line game mats back to back in a sheet protector and a dry erase marker. Display the first puzzle in Level 2 and ask students, "What do you notice? What is your strategy for solving this puzzle?"
- Have students share their strategies for locating where to place the fraction on the number line.
- Discuss how they partition the number line and then locate the fraction.
- Have students mark the location of the fraction on the 0-1 number line game mat.
- Select some students to share their strategy. Discuss partitioning the number line into equal parts based on the denominator and then

- Display the first puzzle in Level 4. Discuss how these puzzles compare to puzzles in Level 2.
- Have students mark the location of the fraction on the 0-5 number line.
- Have students share their strategies for locating the fraction on the number line.
- Discuss how they know which two whole numbers the fraction is between.
- Ask questions leading to a discussion about equivalent fractions and benchmarks on the number line.
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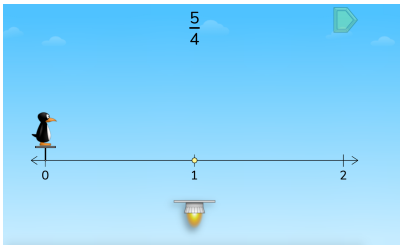
- Ask questions leading to a discussion about adding fractions with unlike denominators using equivalent fractions.
- Repeat with the remaining puzzles in Level 4.



Sample Questions

- What do you notice about the number line?
- Is there another name for that location on the number line? (for a fraction at a half or whole number)
- What does the animation show us? (Discuss the role of the numerator and denominator in a fraction.)
- How can you use fractions that you can easily locate (called benchmark fractions) to help you locate this fraction (e.g., 8/3)?
- Freeze animation and ask, "Where would an additional ½ be located on this number line?"

What to look for

How does the student:

- use benchmarks to locate fractions? (I know ½ is here and this is between ½ and 1.)
- decide which whole numbers to locate a fraction between?
- explain fraction equivalence?
- use the number line to add/subtract fractions?

Locate and label $\frac{6}{3}$ on this number line.