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Addition and Subtraction with Fractions

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. Ask students, "What do you notice? How do you think we solve this puzzle?"
- Have students Think, Pair, Share their ideas.
- Move the cursor along the bottom of the puzzle and ask students, "What is happening as we move the cursor? What does the denominator tell us? How do you know which denominator to choose?"
- Say to students, "Name the two fractions you see in the alien ships on your whiteboard. What do you think happens when we add these two fractions together? How do we name the total?"
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 - Say to students, "Name the two fractions you see in the alien ships on your whiteboard. What do you think happens when we add these two fractions together? How do we name the total?"
- Say to students, "The denominator is the *cutting* number. It tells us how many equal pieces our whole has been cut into. How many equal pieces has each of the circles been cut into? What should our denominator be?" Write the correct denominator.
- Display the whole addition equation and read the equation out loud. (e.g., "one third plus one third is two thirds"). Ask students, "Why did the numerator change but the denominator did not?"
- Review the meaning of the numerator and denominator in the solution.
- Repeat with the remaining puzzles in Levels 1.
- What is the name of each fraction in the alien ship?
- 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?
- Do we have more or less pieces than we started with? Why or why not?

How does the student:

- name the fractions in the alien ship?
- explain the role of the numerator and denominator?
- discuss different strategies for solving the puzzles.
- discuss counting by unit fractions and the similarity to adding whole numbers?



Sample Questions

What to look for

Fourth Grade

Materials







Alien Bridge