PUZZLE TALK

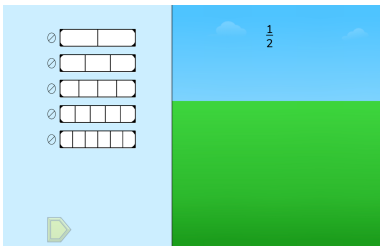
Third Grade | **Comparing Fractions** | **Fricks**

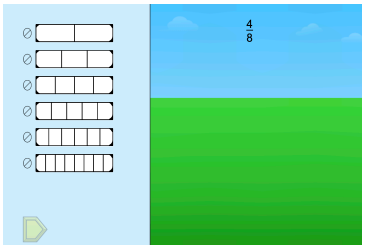
Materials

whiteboards, dry erase markers
fraction tools such as number lines, Cuisenaire rods, fraction strips, etc.

Directions

- 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 with a partner. Try a student's solution and watch the feedback. Say to students, "Is there another fraction that is equal to this fraction? Can you figure out which fraction will fill this hole too?"
- Have students determine an equivalent fraction. Try the student's solution. Ask students to record the solution on their whiteboards by writing a number sentence using the equal sign.
- If the puzzle has more equivalent fractions, have students determine the missing fractions and record the comparisons as a number sentence.
- Repeat with the remaining puzzles in Level 1.





- Display the first puzzle in Level 2. Ask students to write down the fraction they think will fill the hole.
- Ask students to then write down a fraction that is less than the fraction shown. Have students share their fraction with a partner and work to prove that each fraction is less than the fraction shown in the puzzle. Share some students's solutions and prove they are correct.
- Ask students to then write down a fraction that is greater than the fraction shown. Have students share their fraction with a partner and work to prove that each fraction is greater than the fraction shown in the puzzle. Share some students's solutions and prove they are correct.
- Solve the remaining puzzles in Level 2.
- Choose one puzzle from Level 2. Have students draw a number line and place the given fraction on the number line. Then ask students to place all of the equivalent fractions on the number line too. Discuss why equivalent fractions are at the same spot on the number line.

Sample Questions

- What do you know about the fraction in the sky?
- What does it mean if two fractions are equivalent?
- How can you prove these fractions are equivalent?
- How do these fractions compare? Which fraction is greater? How do you know?
- How did you know where to place this fraction on the number line?
- Why are equivalent fractions at the same spot on the number line?

What to look for

How does the students:

- name each fraction before selecting it to fill the hole?
- determine an equivalent fraction?
- compare two fractions?
- write equations to show equivalence?
- discuss the numerator and denominator of each fraction/
- place equivalent fractions on a number line?