

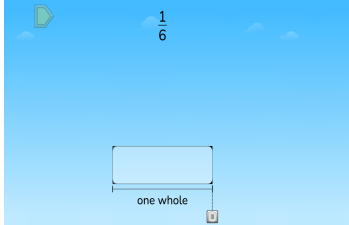
Puzzle Talk - Grade 3

Match Fraction (Level 1)



ST Math
Created by MIND Education

These facilitation suggestions are what a student-led discussion might look like when looking at puzzles in Level 1. Depending on how students respond, it likely would take one session for Level 1.

Description <ul style="list-style-type: none">● Puzzle Location: Grade 3 > Fraction Concepts > Match Fraction > Level 1● Topic: Represent fractions with visual models.● Purpose of the Puzzle Talk: Focus on student thinking and developing problem solving skills using guiding questions for each step in the Problem Solving Process● Preparation: View the Game in a Minute video● Gather Materials: Provide students with whiteboards and dry-erase markers	 <p>click here for puzzle</p>
Notice and Wonder <ul style="list-style-type: none">● Choose a puzzle from Level 1 to explore puzzles that involve the partitioning of a rectangle.● Ask: "What do you notice about this puzzle?" Allow a few students to share out.● Ask: "What do you wonder about this puzzle?" Allow students to share out.	
Predict and Justify <ul style="list-style-type: none">● Ask students to think about how they might solve this puzzle. Move the cursor across the rectangle at the bottom and ask students to watch what happens. After having a moment to think individually, ask students to share their ideas with a neighbor and then share as a class. Ask which idea they would like to test.● Students should provide mathematical reasoning for the idea they want to try. Because there are two steps to this puzzle, you might initially have this conversation in two separate parts. The first conversation will be about dividing/partitioning the rectangle. After trying the first part of the puzzle, the second conversation will be about how many pieces of the rectangle to shade.● As students share their strategies, list these ideas for the class to consider.	
Test and Observe <ul style="list-style-type: none">● Select one of their solutions to try.● Solve the puzzle and have students describe what happened.	
Analyze and Learn <ul style="list-style-type: none">● Ask students to think about how what they saw happen compares to their prediction.● Use the animation controls to pause the puzzle while students check if their answer matches the puzzle on the screen. Discuss how this might provide evidence for why the solution will work or not.● Discuss what happened and what they learned.<ul style="list-style-type: none">○ If the answer was incorrect, discuss how they would like to adjust the strategy and why. Then try solving the puzzle again.● Display another puzzle from Level 1.● Move the cursor across the rectangle at the bottom and ask questions about the math in the puzzle. Some suggestions include:<ul style="list-style-type: none">○ Can you describe what is happening in this puzzle?○ What happens to the rectangle as we move the cursor? Why?○ What does the denominator tell us?● Ask students to complete these sentences:<ul style="list-style-type: none">○ "The denominator is ___, so we need to divide the rectangle into ___ equal parts. What does the numerator tell us?"○ And then, "To represent the numerator I need to ___."● Try a student's strategy and solve the problem. Discuss. Repeat with the remaining puzzles in Level 1.	