

Lines of Symmetry

Fourth Grade

These activities extend the puzzles and the concepts learned in the puzzles throughout the week. The activities might be tasks, word problems, journal writing activities, or hands-on activities designed to deepen student understanding and help students make connections.

Some of the activities listed below work well in a remote environment and can be easily added to your virtual classroom. The activities that can be used remotely are designated as such.

		 Give students dot paper. Display the first puzzle in Level 1. Ask students to solve the puzzle on their dot paper. Share solutions. Solve the puzzle but pause the puzzle before the shape is folded over the line of symmetry. Ask students to name the figure (e.g., rectangle, square, octagon, etc.). Review the definition of a polygon and work together to count the sides to name the shape. Play the puzzle but pause when the shape has been folded. Ask students to name the new shape that has been made. Repeat with other puzzles in Levels 1, 2 and 3.
		 Give students dot paper. Ask students to draw a vertical line following dots from the top of the paper to the bottom. Then ask students to draw a shape on only one side of the line, making sure their shape begins and end on the line. Have students trade papers and complete each other's shapes so that the vertical line represents a line of symmetry. After students finish and trade back, discuss how students can prove the two sides match up. Allow students to cut out and fold the shapes to prove the line is the line of symmetry. (Can be used remotely)
		 Display the first puzzle in Level 3. Give students dot paper. Say to students, "Some figures have 1 line of symmetry, some have more than 1 line of symmetry, and some shapes have 0 lines of symmetry. On your dot paper, draw a figure that does not have a line of symmetry." Share several students' figures with the whole class. Discuss how these shapes are different than a line-symmetric figure. What attributes do they notice that lets them know the shape will not have a line of symmetry. Work through the puzzles in Level 3. Pause after each puzzle is solved and look at the attributes that make the figure have a line of symmetry.
	EVERTICAL Service Enhanced Symmetry or No Symmetry Date:	 Give students a copy of "Symmetry or No Symmetry". For each shape, ask students if they think the line drawn is a line of symmetry or not. Have students prove their claim. Have students fold and sort the shapes into two groups, shapes folded along a line of symmetry or not. Look over the shapes in each group and discuss again why the line is or is not a line of symmetry. <i>(Can be used remotely)</i>
Name Solve 321 x 45 using two dif	FIJZZLE TALK Classroom Extensions Pre-Work Date: ferent strategies?	• If you are using Puzzle Talks as part of your remote learning plan, it is important to think about how to maximize the learning in the virtual environment. One strategy might be to do Pre-Work. Pre-Work encourages students to think about the concept prior to the Puzzle Talk.







Name:	Date:

Shapes can be sorted into groups based on similiarities and differences. What are some properties of shapes you can use to put shapes into groups?

Does a line of symmetry divide a shape into *halves*? Explain.

Thomas drew a shape but didn't show his classmates. He said his shape has 2 sets of equal sides, 2 sets of parallel sides, 4 right angles and 2 lines of symmetry. What shape did Thomas draw? Explain.