## Lesson 9: Symmetry in Action

* Let’s investigate symmetry and perimeter in folded figures.

### Warm-up: Which One Doesn’t Belong: Figures

Which one doesn’t belong?



### 9.1: Before and After

1. Mai has a piece of paper. She can get two different shapes by folding the paper along a line of symmetry. What is the shape of the paper before it was folded?
* 
1. Diego folded a piece of paper once along a line of symmetry and got this right triangle.
* 
* Which shapes could the paper have before it was folded? Explain or show how you know.
* 
* 
* 

### 9.2: Before and After, Perimeter Edition

1. Jada folded a piece of paper along a line of symmetry and got this rectangle.
* 
	1. What could the paper look like before being folded? Draw one or more sketches.
	2. Write an expression for the perimeter of the unfolded paper.
1. Kiran folded a piece of paper twice—each time along a line of symmetry—and got the same rectangle as Jada did.
* Show that each expression could represent the perimeter of the paper Kiran folded.
	1. $\left(4×182\right)+\left(4×105\right)$
	2. $\left(2×182\right)+\left(8×105\right)$
	3. $\left(8×182\right)+\left(2×105\right)$



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