



Symmetry in Action

Let's investigate symmetry and perimeter in folded figures.

Warm-up

Which Three Go Together: Figures

Which 3 go together?

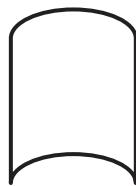
A



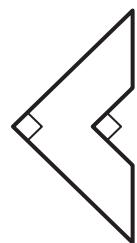
B



C



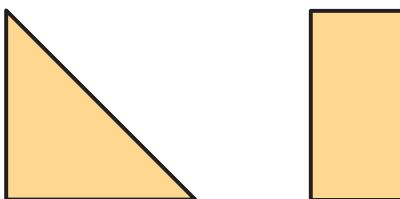
D



Activity 1

Before and After

1. Mai has a piece of paper. She can get each of these 2 shapes by folding the paper once along a line of symmetry. What is the shape of the unfolded paper?

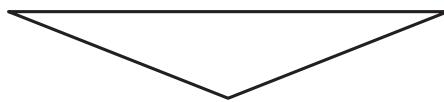


2. Diego folded a piece of paper once along a line of symmetry and got this right triangle.



Which shapes could the paper have had before it was folded? Explain or show your reasoning.

A



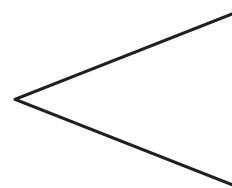
B



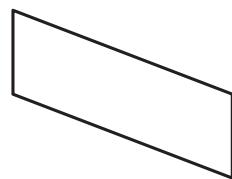
C



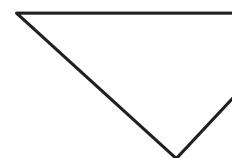
D



E



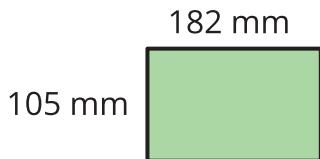
F



Activity 2

Before and After: Perimeter Edition

1. Jada folded a piece of paper along a line of symmetry and got this rectangle.



- a. What could the paper look like before being folded? Draw one or more sketches.

- b. Write an expression for the perimeter of the unfolded paper.

2. Kiran folded a different piece of paper twice—each time along a line of symmetry. Kiran’s folds created the same rectangle as Jada’s did.

Show that each expression could represent the perimeter of Kiran’s unfolded paper.

a. $(4 \times 182) + (4 \times 105)$

b. $(2 \times 182) + (8 \times 105)$

c. $(8 \times 182) + (2 \times 105)$