Illustrative Mathematics

Grade 4 Unit 8
Lesson 9
CC BY 2021 Illustrative Mathematics®

Unit 8 Lesson 9: Symmetry in Action

WU Which One Doesn't Belong: Figures (Warm up)
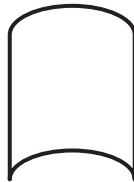
Student Task Statement

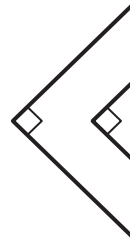Which one doesn't belong?

A   B   C   D

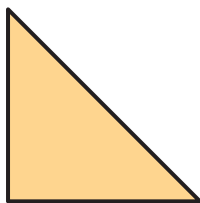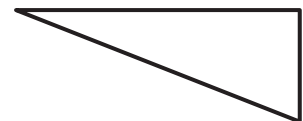## 1 Before and After

Student Task Statement

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?
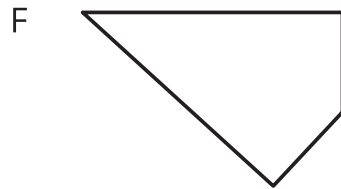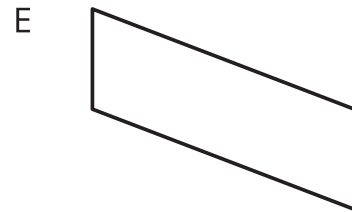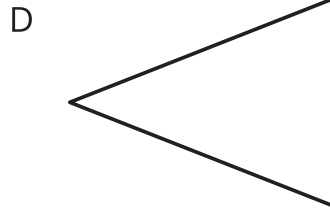

2. Diego folded a piece of paper once along a line of symmetry and got this right triangle.
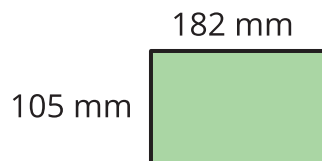
Which shapes could the paper have before it was folded? Explain or show how you know.

A

B

C   D

E   F

2 Before and After, Perimeter Edition

Student Task Statement

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

182 mm

105 mm

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 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.

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

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

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

Images for Activity Synthesis