Unit 8, Lesson 5

Symmetry in Figures (Part 2)

Let's draw some figures that have lines of symmetry.

Warm-up

Number Talk: Keeping Track

Find the value of each expression mentally.

- $43 + 57 + 50 + 7 + 3 + 40$

- $243 + 57 + 43 + 257$

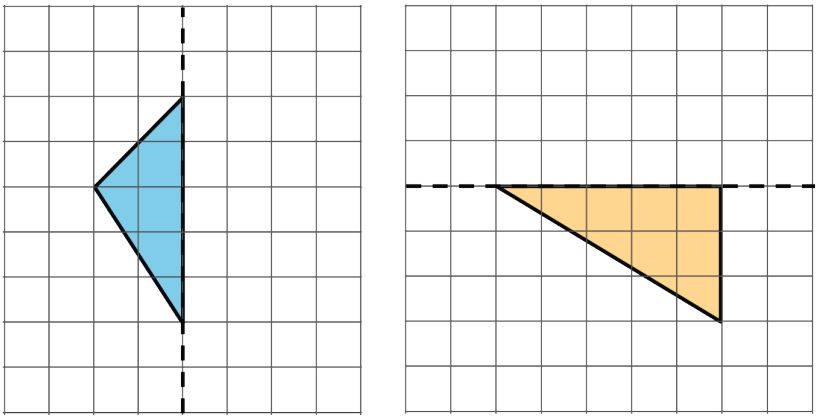
- $1{,}043 + 257 + 57 + 200 + 43 + 1{,}000$

- $1{,}943 + 257 + 1 + 257 + 1{,}000 + 943$

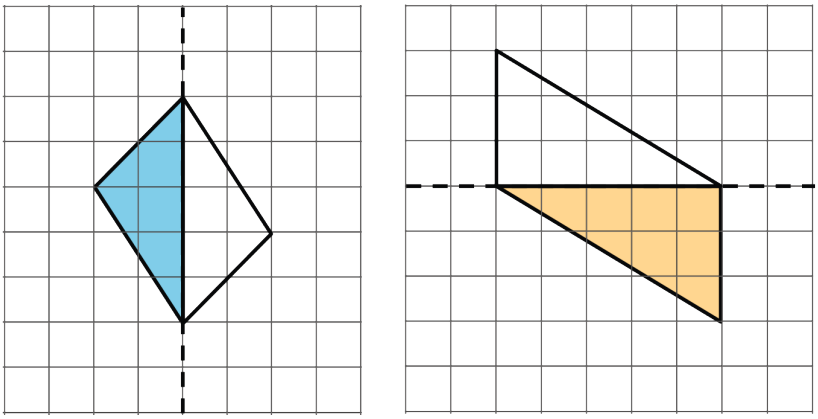
Activity 1

Half-Drawn Figures

Each shaded triangle is half of a whole figure that has a line of symmetry shown by the dashed line.



Clare drew some segments to show the missing half of each figure.

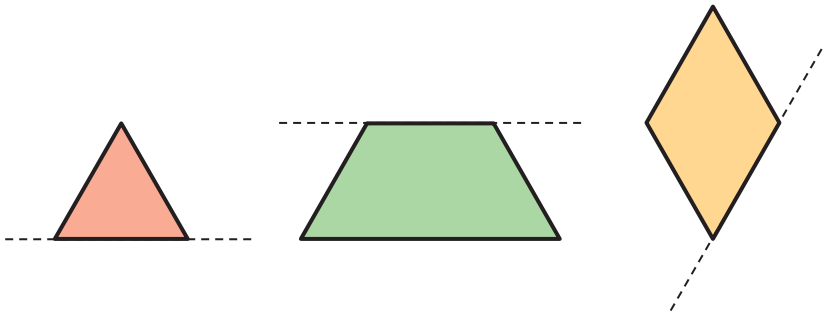


Do you agree that the dashed line is a line of symmetry for each figure Clare completed? Explain your reasoning. If you disagree with Clare's work, show a way to complete the drawing so the dashed line is a line of symmetry.

Activity 2

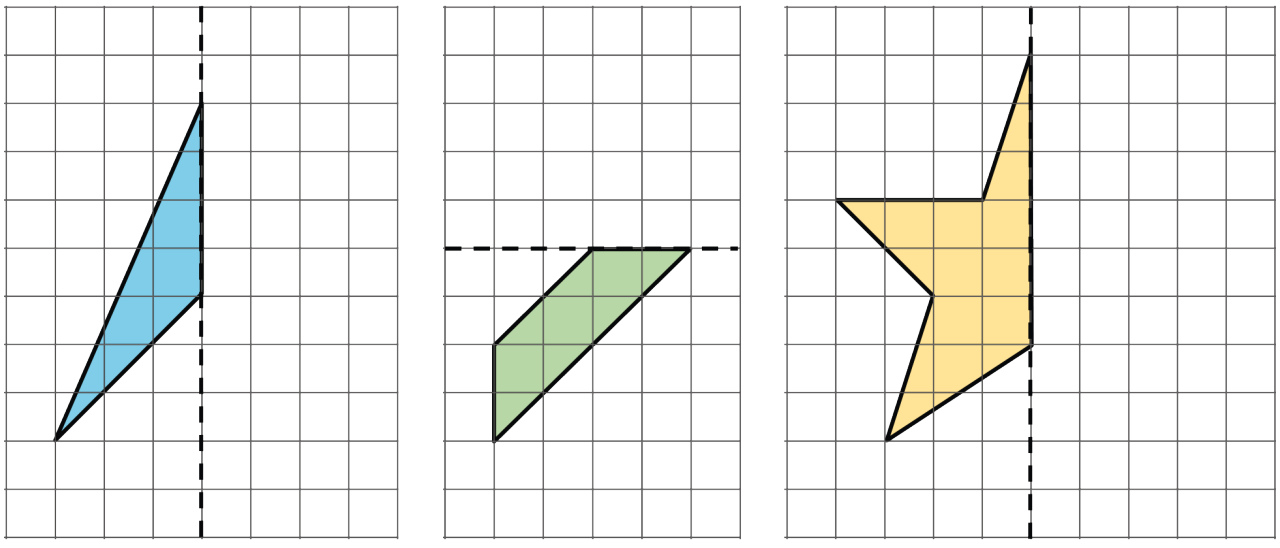
What's the Whole Picture?

1. Here are 3 figures. Each figure is half of a whole figure. The dashed line is a line symmetry of that whole figure.

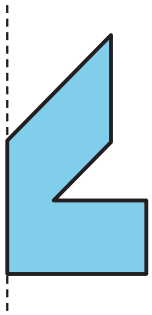


Use patty paper to help you draw the whole figure.

2. Each figure on the grid is half of a whole figure. The dashed line shows the line of symmetry for the whole figure. Use the grid to help you draw the whole figure. Be as precise as possible.



3. Here is another figure that is half of a whole figure with a vertical line of symmetry. Draw the whole figure. Be as precise as possible.



Activity 3

What Could the Whole Figure Be?

Trace a triangle cutout from your teacher.

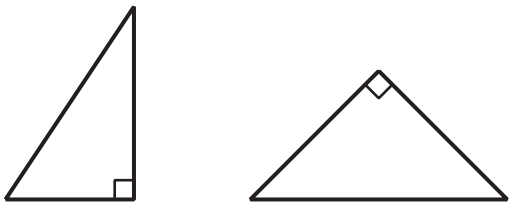
The triangle is half of a whole figure that has a line of symmetry. What could the whole figure look like? Can you show two possibilities? Three possibilities? Show your thinking. Organize it so it can be followed by others.

Section A Summary

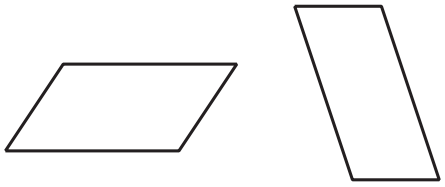
We looked at different attributes of shapes, such as the number and length of sides, the measurements of sides and angles, and whether the shapes had parallel or perpendicular sides.

We then used these attributes to classify quadrilaterals and triangles.

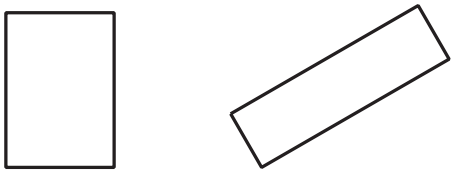
Right triangles have 1 right angle.



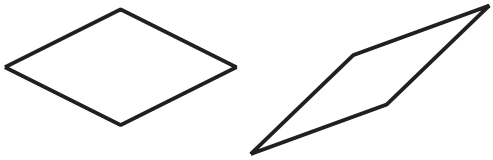
Parallelograms have 2 pairs of parallel sides.



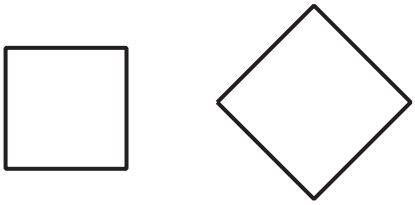
Rectangles have 2 pairs of parallel sides and 4 right angles.



Rhombuses have 4 equal sides.



Squares have 4 equal sides and 4 right angles.



We also learned about symmetry. A figure has **symmetry** if its parts can match up exactly after it is folded or turned. A figure that has a **line of symmetry** can be folded along that line to create 2 halves that match up exactly.