

Mirror Shapes

Learning objective

- Complete patterns with up to two lines of symmetry.

Resources

- “Mirror Shapes” Notebook file
- “Polygon Shapes” (p. 73)
- individual whiteboards and pens
- small plastic mirrors, one for each student
- large mirror

Whiteboard tools

- Pen tray
- Select tool
- Lines tool

Getting Started

Display page 2 of the “Mirror Shapes” Notebook file. Ask the class to discuss, in pairs, what properties the shape has (corner, side, parallel sides, and so on). Label these properties on the SMART Board.

Mini-Lesson

1. Explain to students that in this lesson they will be looking at another property that many polygons have: symmetry. In pairs, ask students to come up with a definition for *symmetry*. Invite them to explain their definitions and write them on page 3 of the Notebook file. As a class, they should agree on the most correct definition.
2. Go back to page 2 and explain that this rectangle has two lines of reflective symmetry. Use the Lines tool to draw the lines of symmetry on the shape. Use a large mirror to show the lines of symmetry.
3. Display page 4 and ask the class to discuss where they think the lines of symmetry will appear on the first shape. Ask for a volunteer to draw these lines in, and then check them with the mirror. Repeat this with the other polygons. (The shapes can be rotated, if required.)

Independent Work

Give out copies of “Polygon Shapes” (p. 73) and plastic mirrors. Ask students to explore the symmetry of each of the regular shapes, writing beneath each how many lines of symmetry it has (an equilateral triangle has three lines of symmetry, for example).

Wrap-Up

Display page 5 of the Notebook file, which includes the same shapes as on the reproducible sheet. Review the work done by students by asking for volunteers to draw the common lines of symmetry onto the shapes on the SMART Board. Ask students if there were any shapes that they found unusual. Direct the conversation toward circles, which have an infinite number of lines of symmetry. Illustrate this, using page 6 of the Notebook file. Return to the class definition and ask if it needs editing. Make any suggested changes.