Vocabulary

- **plane figure**
- **circle**
- **polygon**
- **side**
- **vertex**
- **triangle**
- **quadrilateral**
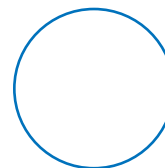- **pentagon**
- **hexagon**
- **octagon**

Plane Figures

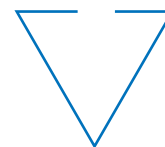**Objective** Identify, describe, and classify plane figures.

Learn by Example

In Lesson 1, you learned about line segments and angles. **Polygons** are **plane figures** that are made up of line segments and angles.

Plane figures are flat figures. They can be closed or not closed. A **circle** is a closed plane figure.
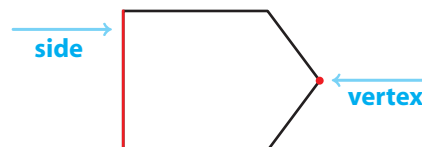
closed   **not closed**

Polygons

Polygons are closed plane figures that have three or more sides.
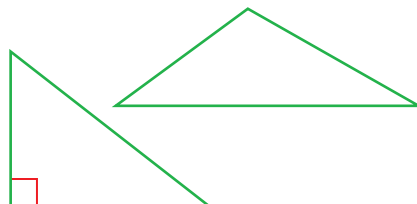
The name of a polygon tells the number of sides.

side   **vertex**

Each **side** is a line segment.   A **vertex** is a point where two sides meet.

Triangle
3 sides

Quadrilateral
4 sides
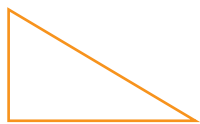
Pentagon
5 sides

Hexagon
6 sides

Octagon
8 sides

Tell whether the figure is a polygon. If it is, write its name.
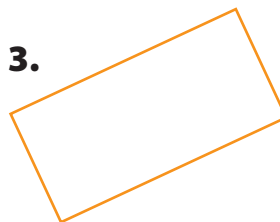
1.

2.
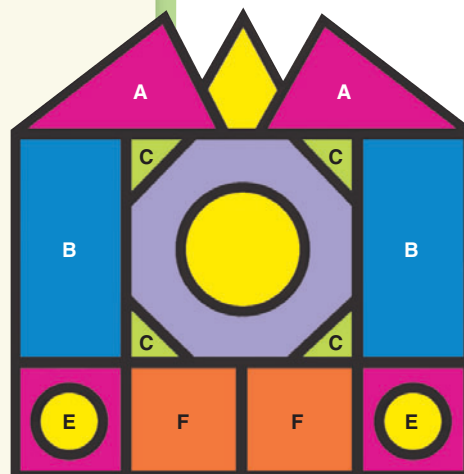
3.

4.

5.

6.

Guided Problem Solving

Use the questions to solve this problem.

7. Sort the plane figures that are marked with a letter into two or more groups.

   a. Understand What are you asked to do?

   b. Plan How can you sort the figures?

   c. Solve Use your rule. Sort the figures.

   d. Look Back How can you check that you included all the figures?

8. Look back at Problem 7. Sort the figures in another way.

123 Math Talk Is a circle a polygon? Explain why or why not.