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# 30 Recognizing and Drawing Shapes

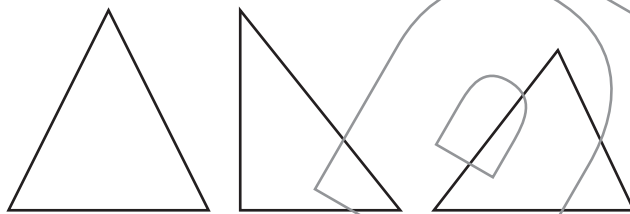


## Introduction

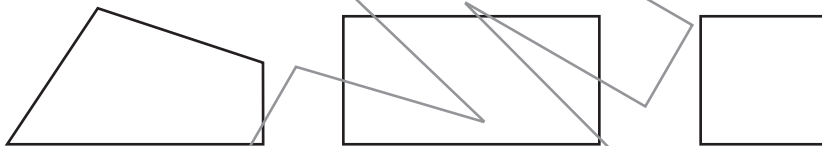
Shapes are often described by the number of sides and angles. A **side** is a straight line. An **angle** is the place where two straight sides meet. It looks like a corner.

**Plane figures** are flat shapes.

**Triangles** have 3 sides and 3 angles.



**Quadrilaterals** have 4 sides and 4 angles. Some quadrilaterals have special names.

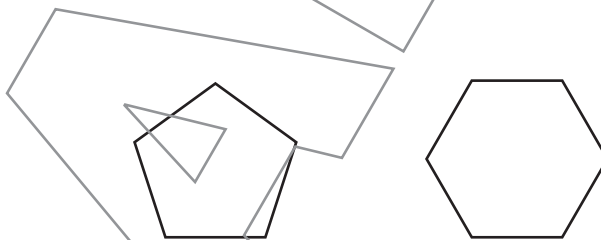


Quadrilateral

Rectangle

Square

**Pentagons** have 5 sides and 5 angles. **Hexagons** have 6 sides and 6 angles.



Pentagon

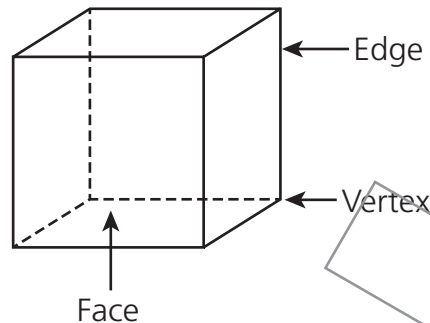
Hexagon

A **rectangle** is a quadrilateral. It has opposite sides that are the same length and square corners.

A **square** is a rectangle with sides that are the same length.

A **solid figure** is not flat. A **cube** is a solid figure.

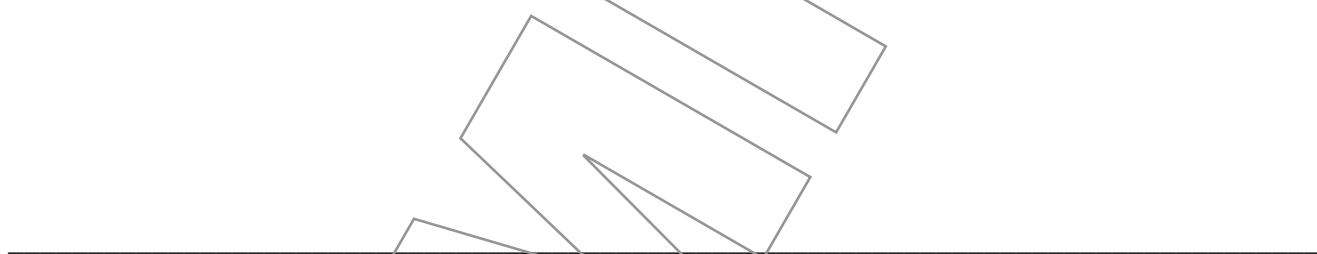
A cube has 6 **faces** that are all squares. A face is a flat section. It has 8 **vertices**, which are angles formed when corners meet. It also has 12 **edges**, which are angles formed when two sides meet on a three-dimensional figure.



Vertices are more than one **vertex**.

### Think About It

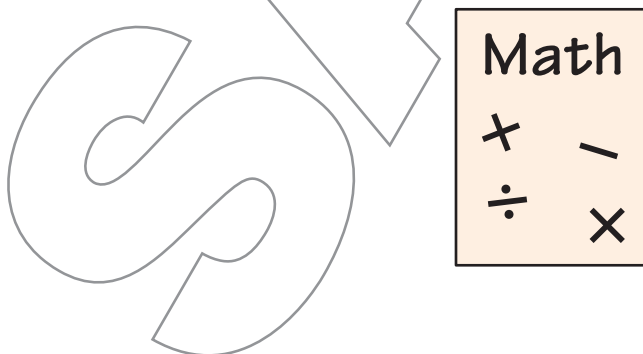
Draw two shapes you see in your classroom. What are their names?



## Focused Instruction

**Count the number of sides and angles to name a shape.**

- Cora drew this shape. It shows the front of her math book. What words describe the shape?



How many sides does the shape have? \_\_\_\_\_

How many angles does it have? \_\_\_\_\_

Choose the word that describes the shape with this number of sides and angles.

triangle    quadrilateral    pentagon    hexagon

You can describe some shapes using more than one name.

Are the corners of this figure square or not square?

\_\_\_\_\_

What is true about the opposite sides of the figure?

\_\_\_\_\_

Look at your answers to the last two questions. What is another name that describes Cora's shape?

\_\_\_\_\_

### Use a description to draw a shape.

- Draw a plane figure that has 6 sides and 6 angles.

What is a plane figure?

\_\_\_\_\_

What are sides?

\_\_\_\_\_

What are angles?

\_\_\_\_\_

Draw your plane figure in the space below.

What is the plane figure you drew called? \_\_\_\_\_

What is true about the number of sides and the number of angles in a plane figure?  
\_\_\_\_\_  
\_\_\_\_\_

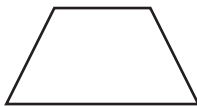
Can you draw a plane figure with 3 sides and 4 corners? With 6 sides and 3 corners?

**Use what you know about recognizing and drawing shapes to answer these questions.**

- 1 Draw a plane figure that has 4 sides and 4 angles.
- 2 A plane figure has 5 sides and 5 angles. What is the name of the plane figure?  
\_\_\_\_\_
- 3 How many square faces make up a cube? \_\_\_\_\_

**Solve the following problems.**

- 1 What is a name for this plane figure?



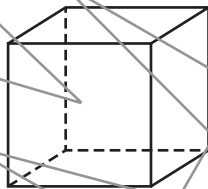
You can name a plane figure by the number of sides and angles.

**Answer** \_\_\_\_\_

- 2 Draw a plane figure that has 5 angles.

How many sides will the plane figure have?

- 3 Look at the solid figure below.



**Part A** What is the name of this figure?

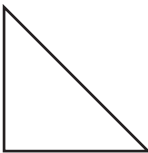





**Answer** \_\_\_\_\_

**Part B** Draw the face of this solid figure.

How many sides does one face have?

**Solve the following problems.**

- 1** Which of these plane figures are quadrilaterals? Mark the correct column for each plane figure.

	<b>Quadrilateral</b>	<b>Not a Quadrilateral</b>
		
		
		
		
		
		

- 2** How many square faces does a cube have?

- A** 1
- B** 6
- C** 8
- D** 12

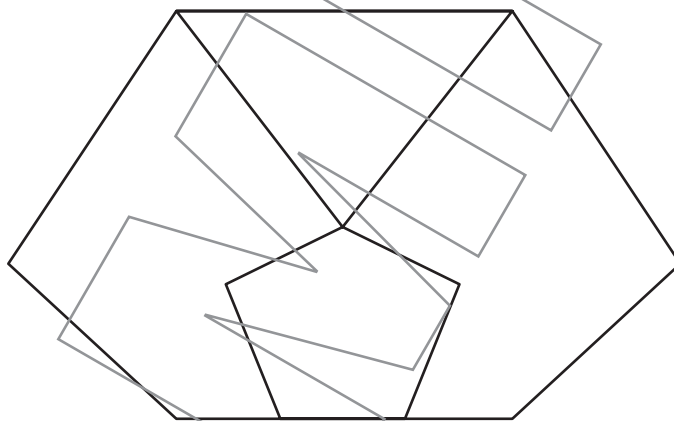


3 Draw a shape that has 3 sides.

4 Circle the shapes that have less than 5 sides.



5 Kasey drew this picture. It is made up of plane figures.



**Part A** Color the plane figure with 3 sides red.

**Part B** Color the plane figure with 5 sides green.

**Part C** Color the plane figures with 6 sides orange.