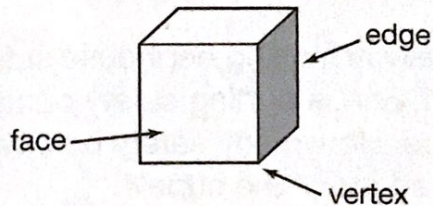# Relating Solids and Shapes

Some solid figures have faces, edges, and vertices. Below is an example of the faces, edges, and vertices of a cube.

A face is a flat surface on a solid figure.
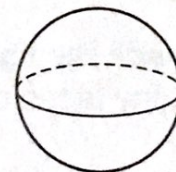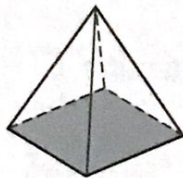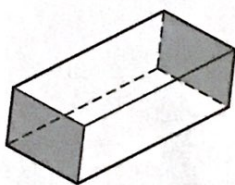There are 6 faces on a cube.

An edge is where two faces meet.
There are 12 edges on a cube.

A vertex is where 3 or more edges meet.
There are 8 vertices on a cube.

Some figures do not have edges or vertices.

edge
face
vertex

Look at the solid figures below.

1. Which solid figure has the same number of faces, edges, and vertices as a cube?

   _____

2. Which solid figure has 4 triangular faces?

   _____

3. Which solid figure has only 2 flat surfaces?

   _____

4. Which solid figure does not have any faces, edges, or vertices?

   _____

5. **Reasoning** How are a cube and a rectangular prism alike? How are they different?
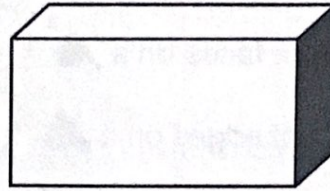
   _____

   _____

   _____

   _____

Relating Solids and Shapes

For **1–4**, use the rectangular prism pictured at the right.

1. How many faces does this rectangular prism have?
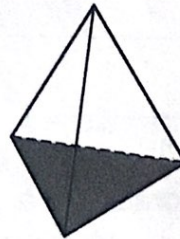
_____

2. What are the shapes of each of the faces?

_____

3. How many edges does this rectangular prism have?

_____

4. How many vertices does this rectangular prism have?

_____

For **5–8**, use the pyramid pictured at the right.

5. How many faces does this pyramid have?

_____

6. What are the shapes of each of the faces?

_____

7. How many edges does this pyramid have?

_____

8. How many vertices does this pyramid have?

_____

9. Writing to Explain How could you describe a cylinder to someone who has never seen one?

_____

_____

_____

10. Which two figures have the same number of faces, edges, and vertices?

  ○ Cylinder and pyramid
  ○ Rectangular prism and sphere
  ○ Pyramid and cube
  ○ Rectangular prism and cube