

Name _____

Three-Dimensional Figures

Essential Question How can you identify, describe, and classify three-dimensional figures?



Measurement and Data—
5.MD.3

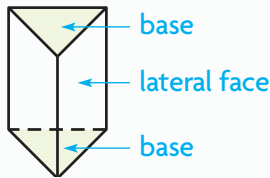
MATHEMATICAL PRACTICES
MP.6, MP.7

Unlock the Problem

A solid figure has three dimensions: length, width, and height. **Polyhedrons**, such as prisms and pyramids, are three-dimensional figures with faces that are polygons.

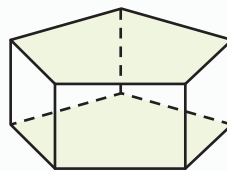
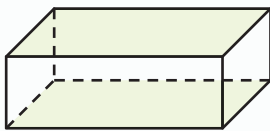
A **prism** is a polyhedron that has two congruent polygons as **bases**.

A polyhedron's **lateral faces** are polygons that connect with the bases. The lateral faces of a prism are rectangles.



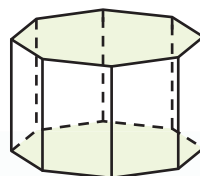
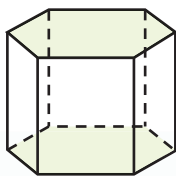
A prism's base shape is used to name the solid figure. The base shape of this prism is a triangle. The prism is a **triangular prism**.

Identify the base shape of the prism. Use the terms in the box to correctly name the prism by its base shape.



Base shape: _____
Name the solid figure.

Base shape: _____
Name the solid figure.



Base shape: _____
Name the solid figure.

Base shape: _____
Name the solid figure.

Math Idea

A two-dimensional figure has the dimensions length and width, which are used to find the figure's area.

A three-dimensional figure, or solid, has three dimensions: length, width, and height. These dimensions are used to find the figure's volume, or the space it occupies.

Types of Prisms

- decagonal prism
- octagonal prism
- hexagonal prism
- pentagonal prism
- rectangular prism
- triangular prism

Math Talk

Mathematical Practices


What shapes make up a decagonal prism, and how many are there? **Explain**.



Analyze What special prism has congruent squares for bases and lateral faces? _____

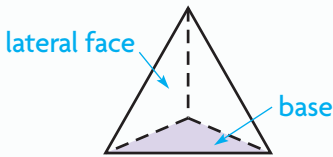
Pyramid A **pyramid** is a polyhedron with only one base. The lateral faces of a pyramid are triangles that meet at a common vertex.

Like a prism, a pyramid is named for the shape of its base.

 Identify the base shape of the pyramid. Use the terms in the box to correctly name the pyramid by its base shape.

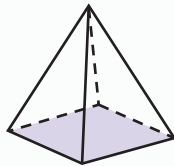
Types of Pyramids

- pentagonal pyramid
- rectangular pyramid
- square pyramid
- triangular pyramid



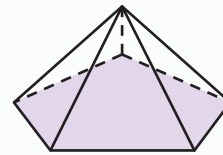
Base shape: _____

Name the solid figure.



Base shape: _____

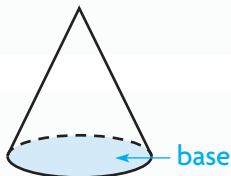
Name the solid figure.



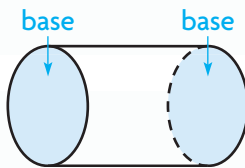
Base shape: _____

Name the solid figure.

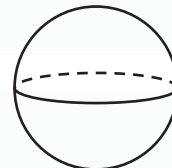
Non-polyhedrons Some three-dimensional figures have curved surfaces. These solid figures are *not* polyhedrons.



A **cone** has 1 circular base and 1 curved surface.



A **cylinder** has 2 congruent circular bases and 1 curved surface.

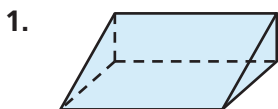


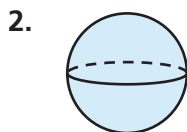
A **sphere** has no bases and 1 curved surface.

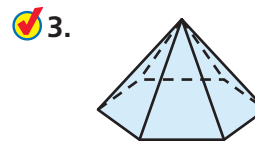
Share and Show



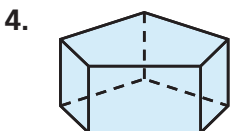
Classify the solid figure. Write *prism*, *pyramid*, *cone*, *cylinder*, or *sphere*.



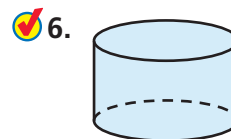




Name the solid figure.



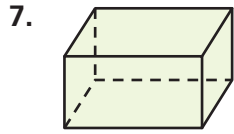


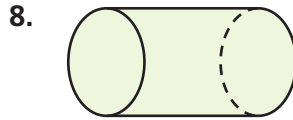


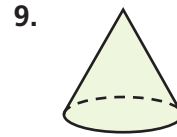
Name _____

On Your Own

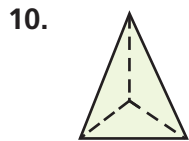
Classify the solid figure. Write *prism*, *pyramid*, *cone*, *cylinder*, or *sphere*.

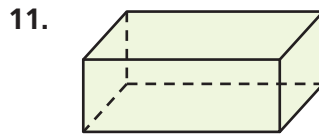


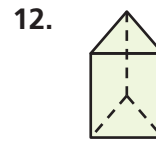


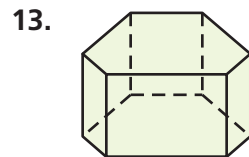


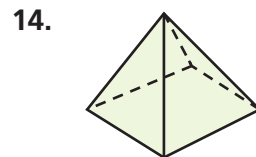
Name the solid figure.

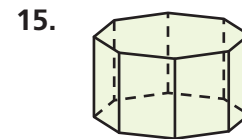












Problem Solving • Applications

16. **MATHEMATICAL PRACTICE 6** Use Math Vocabulary Mario is making a sculpture out of stone. He starts by carving a base with five sides. He then carves five triangular lateral faces that all meet at a point at the top. What three-dimensional figure does Mario make?

17. **THINK SMARTER** What is another name for a cube? Explain your reasoning.



18. **GO DEEPER** Compare the characteristics of prisms and pyramids. Tell how they are alike and how they are different.
