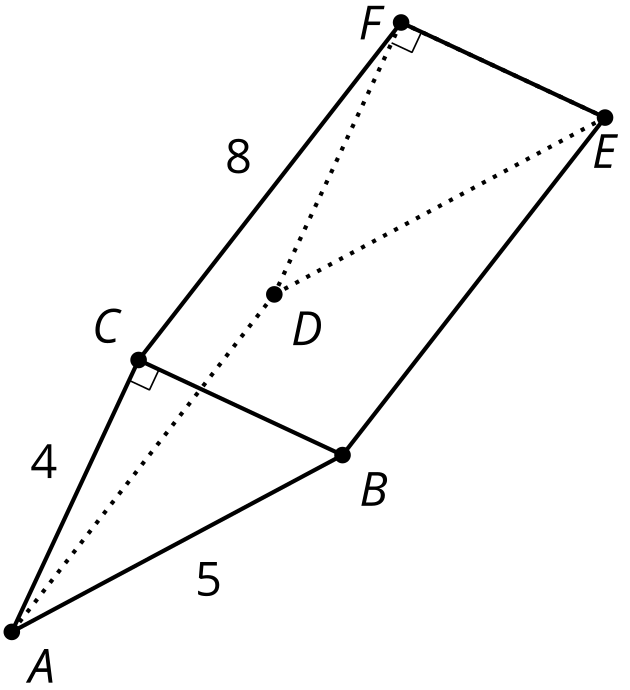
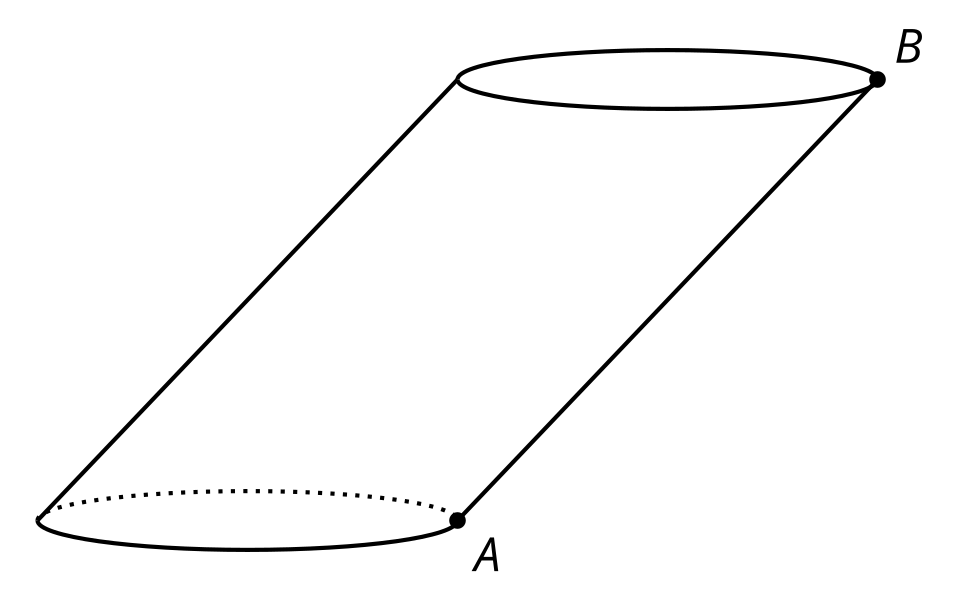
### Lesson 11 Practice Problems

1. This prism has a right triangle for a base. What is the volume of the prism?

* 

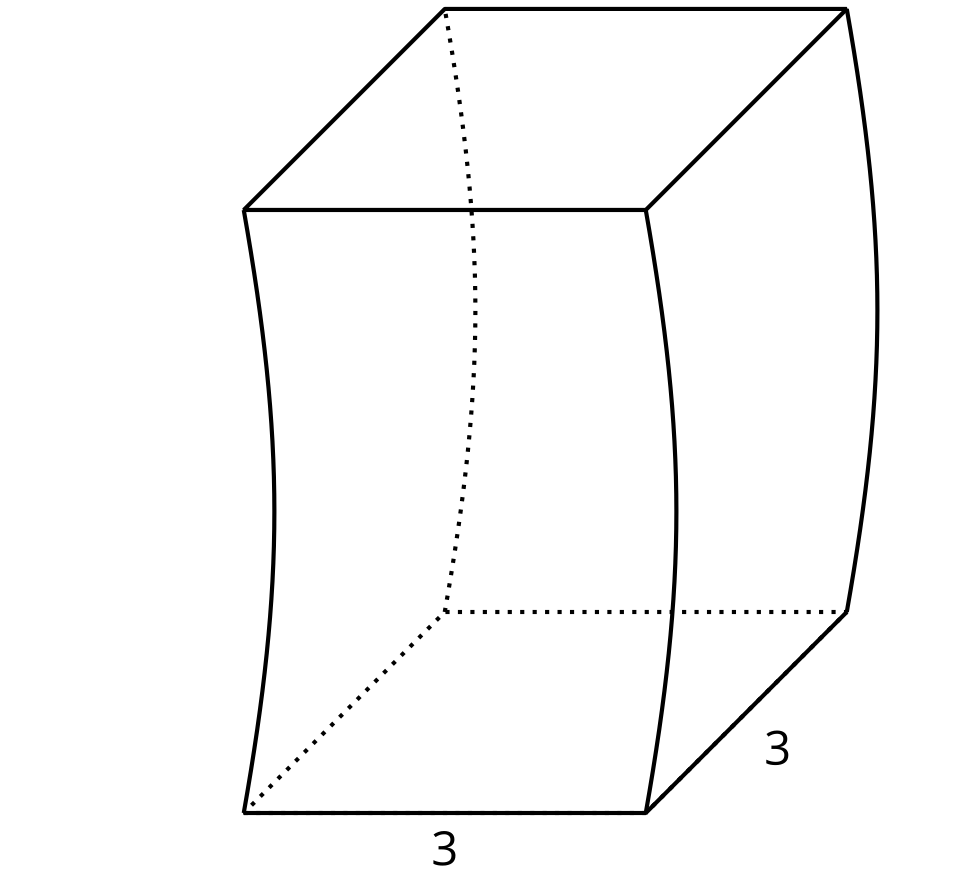
1. An oblique cylinder with a base of radius 2 units is shown. The top of the cylinder can be obtained by translating the base by the directed line segment which has length  units. The segment forms a angle with the plane of the base. What is the volume of the cylinder?

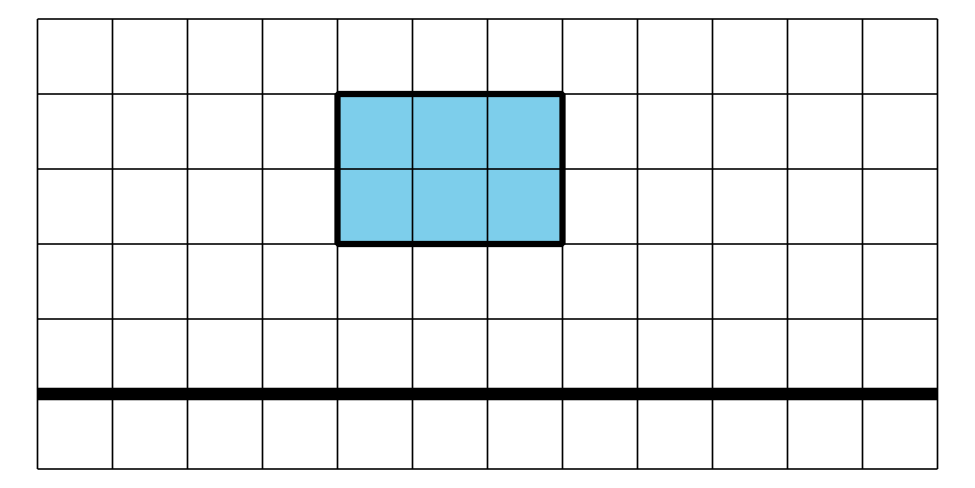
* 

1. A prism has a height of 5 inches and a volume of 80 cubic inches. Select **all** figures that could be the base for this prism.
   1. a square with side length 4 inches
   2. a 2 inch by 8 inch rectangle
   3. a circle with radius 2 inches
   4. a right triangle with legs 4 inches long
   5. a heart-shaped base with an area of 16 square inches
2. This water bottle has a base with area square inches and a height of inches. Tyler thinks the volume of the water bottle is . Elena thinks the volume is less than .

* Do you agree with either of them? Explain your reasoning.
* 
* (From Unit 5, Lesson 10.)

1. This solid has curved sides. All cross sections parallel to the base are squares measuring 3 units on each side. The height from the base to the top is 10 units. What is the volume of this solid?

* 
  1. 30 cubic units
  2. 60 cubic units
  3. 90 cubic units
  4. There is not enough information to determine the volume.
* (From Unit 5, Lesson 10.)

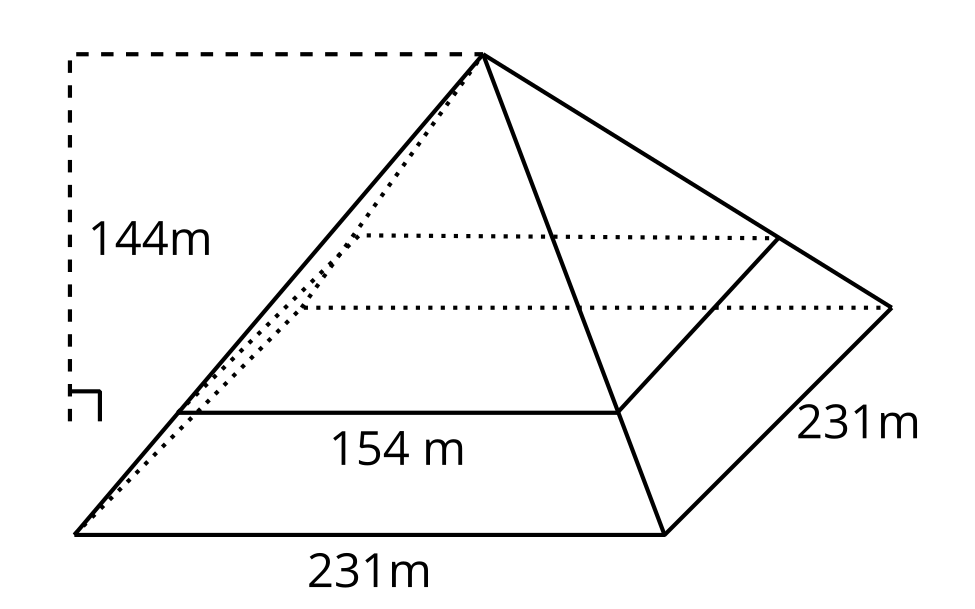
1. Each small square represents 1 square centimeter.
   1. Sketch and label the solid formed by rotating this two-dimensional figure around the horizontal axis shown.
   * 
   1. What is the volume of this solid?

* (From Unit 5, Lesson 9.)

1. A solid has volume 6 cubic units and surface area 22 square units. The solid is dilated, and the image has surface area 198 square units. What is the volume of the image?

* (From Unit 5, Lesson 8.)

1. The Pyramid of Khufu in Giza, Egypt was the world’s tallest free-standing structure for more than 3,500 years. Its original height was about 144 meters. Its base is approximately a square with a side length of 231 meters.

* The diagram shows a cross section created by dilating the base using the top of the pyramid as a center. The cross section has side length of 154 meters.
* 
  1. What scale factor was used to create the cross section?
  2. What is the height of the cross section?
* (From Unit 5, Lesson 3.)

1. Select **all**statements that **must** be true.
   1. The angle bisector of an isosceles triangle is also the perpendicular bisector.
   2. The angle bisector of any angle divides the angle into 2 congruent parts.
   3. The median of a triangle is also the perpendicular bisector.
   4. The median of an isosceles triangles is also the angle bisector.
   5. The median of a triangle is also the angle bisector.

* (From Unit 2, Lesson 14.)



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