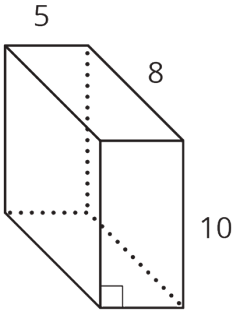
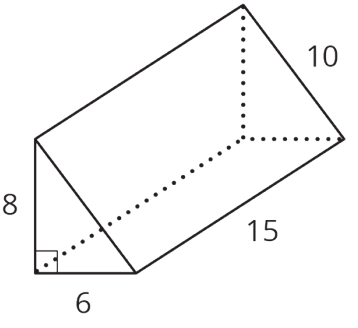
Lesson 16 Practice Problems

1. Edge lengths are given in units. Find the surface area of each prism in square units.

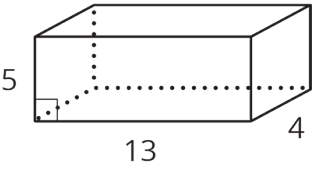
A



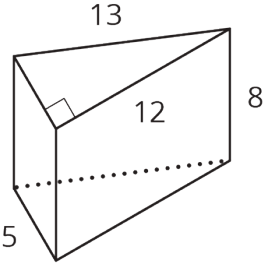
B



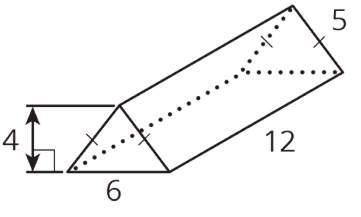
C



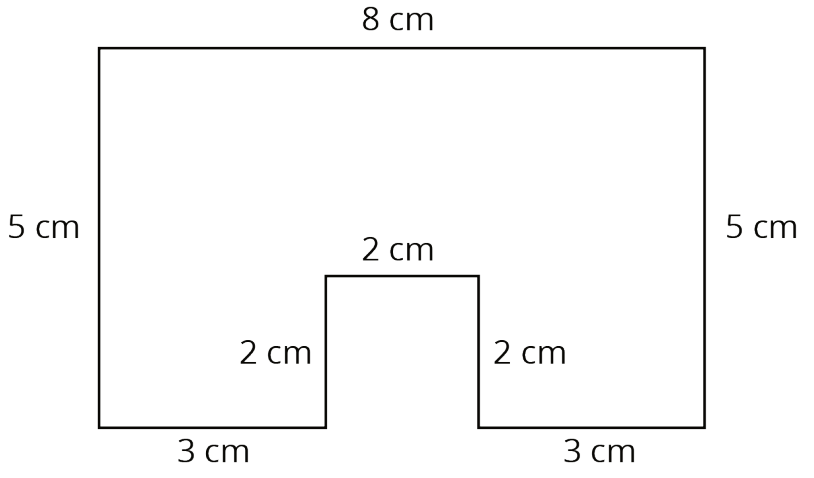
D



E



2. Here is the base of a prism.



a. If the height of the prism is 5 cm, what is its surface area? What is its volume?

b. If the height of the prism is 10 cm, what is its surface area? What is its volume?

c. When the height doubled, what was the percent increase for the surface area? For the volume?

3. Select **all** the situations where knowing the volume of an object would be more useful than knowing its surface area.

A. Determining the amount of paint needed to paint a barn.

B. Determining the monetary value of a piece of gold jewelry.

C. Filling an aquarium with buckets of water.

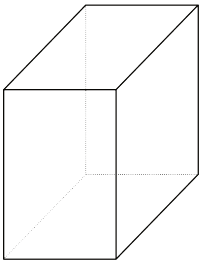
D. Deciding how much wrapping paper a gift will need.

E. Packing a box with watermelons for shipping.

F. Charging a company for ad space on your race car.

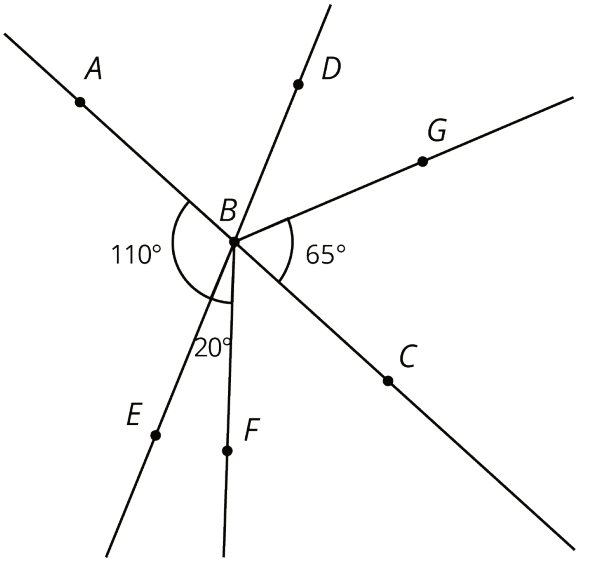
G. Measuring the amount of gasoline left in the tank of a tractor.

4. Priya says, “No matter which way you slice this rectangular prism, the cross section will be a rectangle.” Mai says, “I’m not so sure.” Describe a slice that Mai might be thinking of.



(From Unit 6, Lesson 11.)

5. B is the intersection of line AC and line ED. Find the measure of each of the angles.



   a. Angle ABF

   b. Angle ABD

   c. Angle EBC

   d. Angle FBC

   e. Angle DBG

(From Unit 3, Lesson 13.)

6. Write each expression with fewer terms.

   a. $12m - 4m$

   b. $12m - 5k + m$

   c. $9m + k - (3m - 2k)$

(From Unit 4, Lesson 9.)