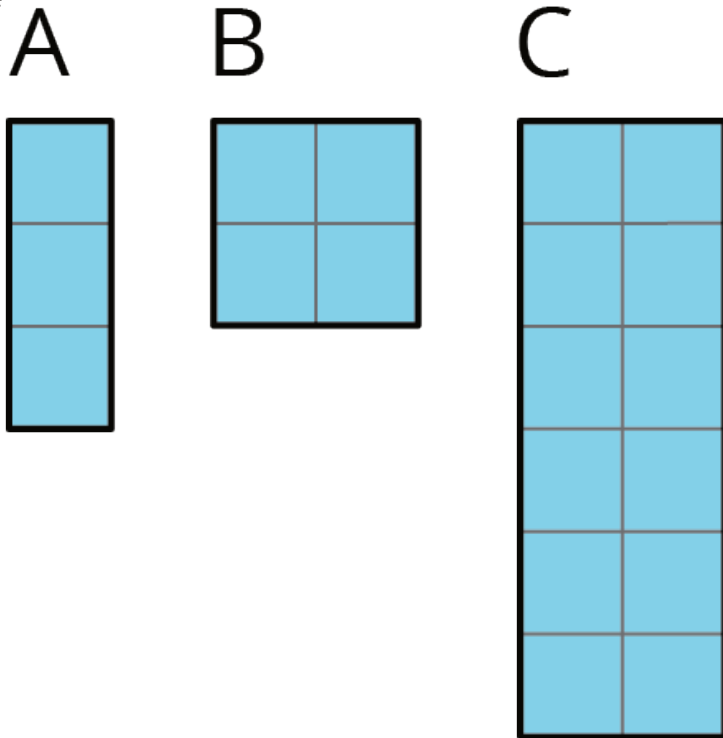# Unit 6 Lesson 14: Volume of Right Prisms

1 Three Prisms with the Same Volume (Warm up)

Student Task Statement

Rectangles A, B, and C represent bases of three prisms.

1. If each prism has the same height, which one will have the greatest **volume**, and which will have the least? Explain your reasoning.

2. If each prism has the same volume, which one will have the tallest height, and which will have the shortest? Explain your reasoning.

2 Finding Volume with Cubes

Student Task Statement

Your teacher will give you a paper with a shape on it and some snap cubes.

1. Using the face of a snap cube as your area unit, what is the area of the shape? Explain or show your reasoning.

2. Use snap cubes to build the shape from the paper. Add another layer of cubes on top of the shape you have built. Describe this three-dimensional object.

3. What is the volume of your object? Explain your reasoning.

4. Right now, your object has a height of 2. What would the volume be:

   a. if it had a height of 5?

   b. if it had a height of 8.5?

3 Can You Find the Volume?

Student Task Statement

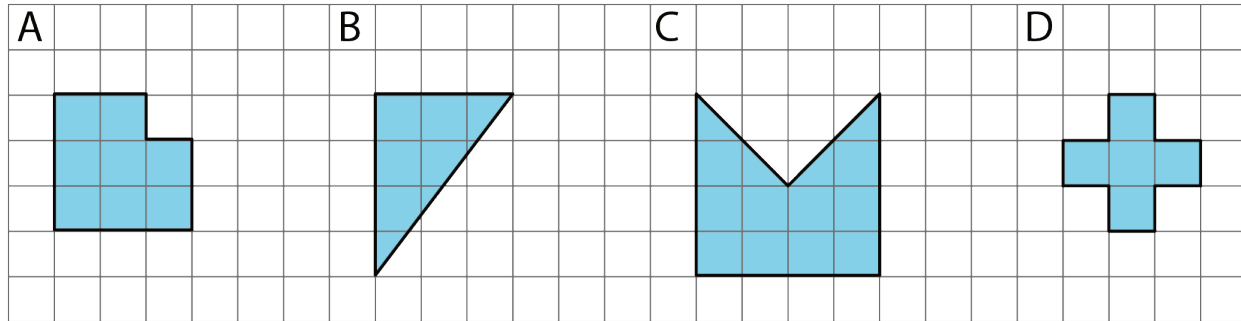Your teacher will give you a set of three-dimensional figures.

1. For each figure, determine whether the shape is a prism.

2. For each prism:
   a. Find the area of the base of the prism.
   b. Find the height of the prism.
   c. Calculate the volume of the prism.

	Is it a prism?	area of prism base (cm^2)	height (cm)	volume (cm^3)
figure A				
figure B				
figure C				
figure D				
figure E				
figure F				

4 What's the Prism's Height? (Optional)

Student Task Statement

There are 4 different prisms that all have the same volume. Here is what the base of each prism looks like.

1. Order the prisms from shortest to tallest. Explain your reasoning.

2. If the volume of each prism is 60 units^3, what would be the height of each prism?

3. For a volume other than 60 units^3, what could be the height of each prism?

4. Discuss your thinking with your partner. If you disagree, work to reach an agreement.