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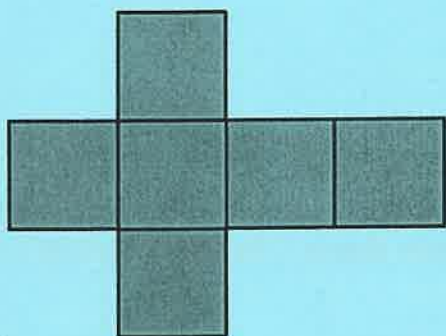
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Unit 1, Lesson 18: Surface Area of a Cube

1. a. What is the volume of a cube with edge length 8 in?
- b. What is the volume of a cube with edge length $\frac{1}{3}$ cm?
- c. A cube has a volume of 8 ft^3 . What is its edge length?

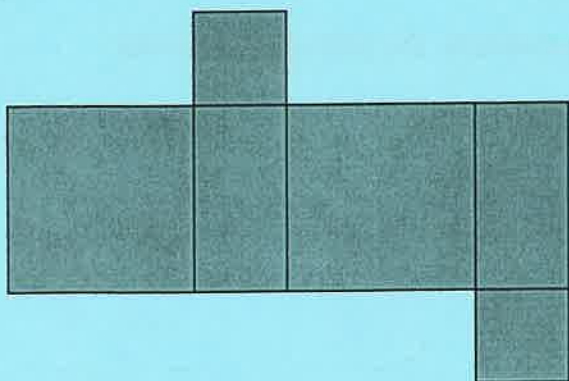
2. a. What three-dimensional figure can be assembled from this net?



- b. If each square has a side length of 61 cm, write an expression for the surface area and another for the volume of the figure.

3. a. Draw a net for a cube with edge length x cm.
- b. What is the surface area of this cube?
- c. What is the volume of this cube?

4. Here is a net for a rectangular prism that was not drawn accurately.



- a. Explain what is wrong with the net.
- b. Draw a net that can be assembled into a rectangular prism.
- c. Create another net for the same prism.

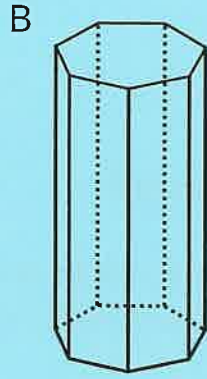
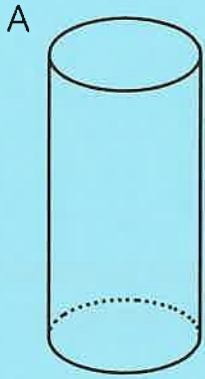
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(from Unit 1, Lesson 14)

5. State whether each figure is a polyhedron. Explain how you know.



(from Unit 1, Lesson 13)

6. Here is Elena's work for finding the surface area of a rectangular prism that is 1 foot by 1 foot by 2 feet.

top & bottom:

$$2 \cdot (12 \cdot 12)$$

$$= 2 \cdot 144$$

$$= 288$$

four side faces:

$$4 \cdot (2 \cdot 1)$$

$$= 8$$

She concluded that the surface area of the prism is 296 square feet. Do you agree with her conclusion? Explain your reasoning.

(from Unit 1, Lesson 12)