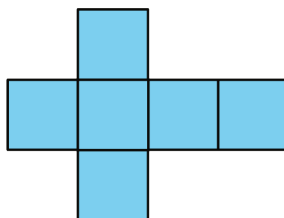# Lesson 18 Practice Problems

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?

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1

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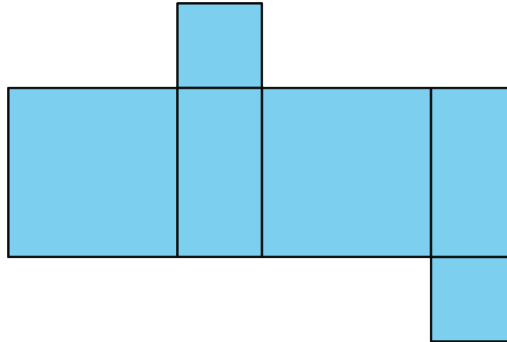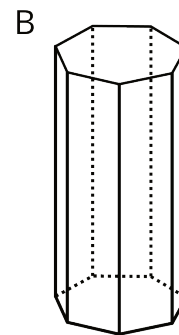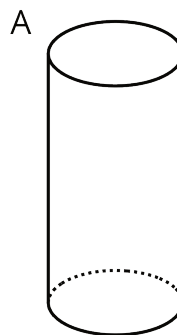

    a. Explain what is wrong with the net.

    b. Draw a net that can be assembled into a rectangular prism.

    c. Create another net for the same prism.

(From Unit 1, Lesson 14.)

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

A   B

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.

12 in   12 in

top & bottom :
$$2 \cdot (12 \cdot 12)$$
$$= 2 \cdot 144$$
$$= 288$$

2 ft

four side faces:
$$4 \cdot (2 \cdot 1)$$
$$= 8$$

1 ft   1 ft

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