1. What is the volume of the figures pictured below?

a.

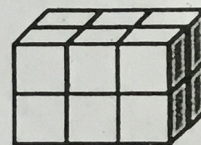b.
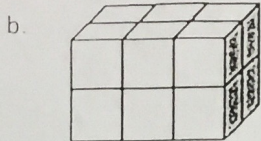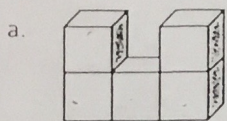
5 cubic units   12 cubic units

1. If this figure were to be folded into a box, how many cubes would fill it?
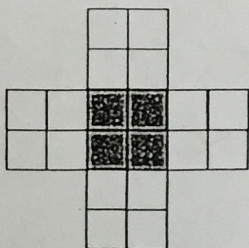
Number of cubes: _____8_____
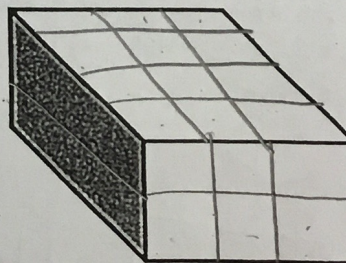
1. Use unit cubes to build the figure to the right, and fill in the missing information.

Number of layers: __2__

Number of cubes in each layer: __6__
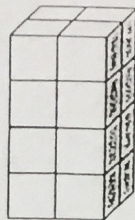
Volume: __12__ cubic centimeters

2. This prism measures 3 units by 4 units by 2 units. Draw the layers as indicated.

Number of layers: 4

Number of cubic units in each layer: 6

Volume: __24__ cubic centimeters

1. Calculate the volume of prism.

Length: __2__ mm

Width: __2__ mm

Height: __4__ mm

Volume: __16__ mm³

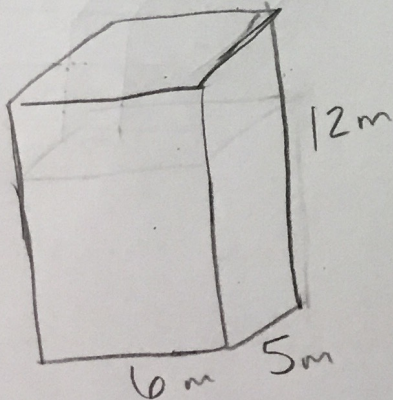Write the multiplication sentence that shows how you calculated the volume. Be sure to include the units.

$$2mm \times 2mm \times 4mm = 16mm^3$$

2. A rectangular prism has a top face with an area of 20 ft² and a height of 5 ft. What is the volume of this rectangular prism?
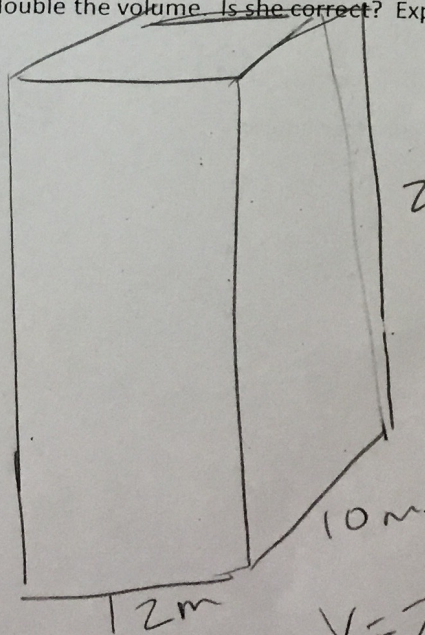
$$Area = l \times w \qquad Volume = l \times w \times h$$

$$20ft^2 \times 5ft = 100ft^3$$

A storage shed is a rectangular prism and has dimensions of 6 meters by 5 meters by 12 meters. If Jean were to double these dimensions, she believes she would only double the volume. Is she correct? Explain why or why not. Include a drawing in your explanation.

12m

6m   5m

V = 360m

24m

No, she is incorrect b/c the volume is

10m

12m   V = 2880m³

Double would be 720m³