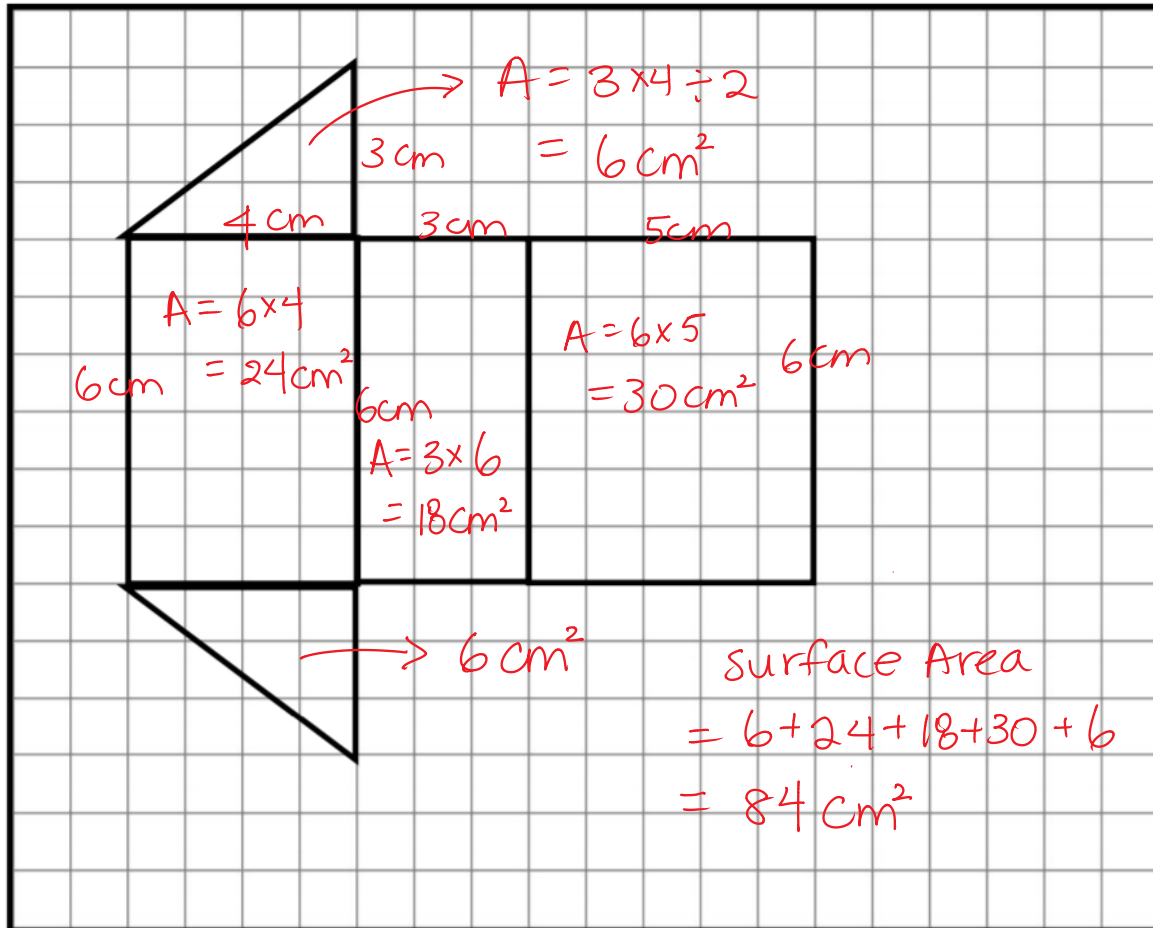


Date: _____

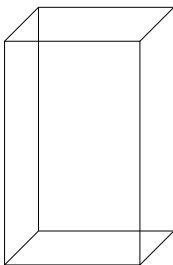
5.3 Surface Area of a Prism

Find the total area of the net shown. Label the measurement for each side.



What shape will this make when it is formed into a 3dimensional polyhedron?

This will make a triangular prism.



How many different rectangles would you get if you made a net of this rectangular prism?

6 rectangles
3 pairs of different rectangles.

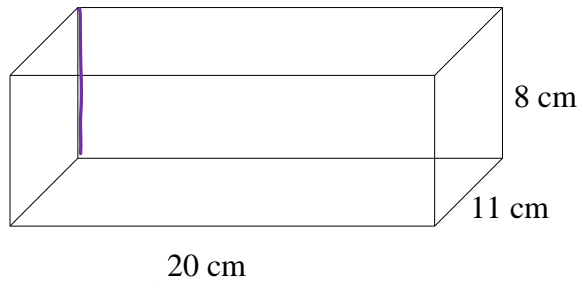
How would you find the area of each rectangle?

$$A = l \times w$$

Surface Area is:

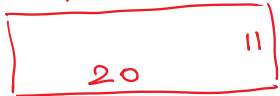
the sum of the areas of all the faces of a 3-D object.

Find the surface area of each shape



Steps to follow
i) draw and label each shape that makes up this prism;
ii) find the area of each shape
iii) add up the areas of each side

Top + Bottom



$$A = 20 \times 11 \\ = 220 \text{ cm}^2$$

$$220 \text{ cm}^2 \times 2 \leftarrow \begin{array}{l} \text{top} \\ + \\ \text{bottom} \end{array} \\ = 440 \text{ cm}^2$$

Front + Back



$$A = 20 \times 8 \\ = 160 \text{ cm}^2$$

$$160 \text{ cm}^2 \times 2 \leftarrow \begin{array}{l} \text{front} \\ + \\ \text{back} \end{array} \\ = 320 \text{ cm}^2$$

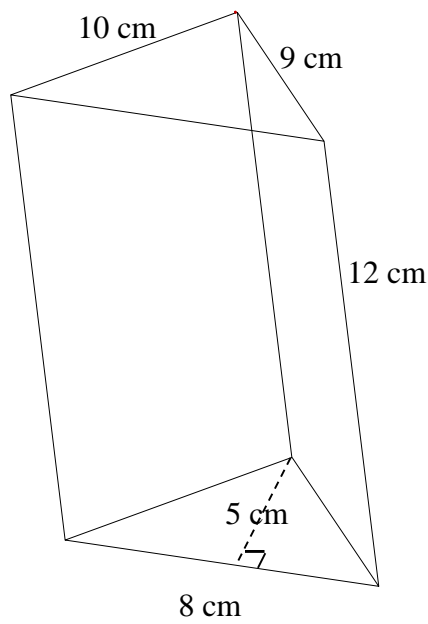
Left + Right



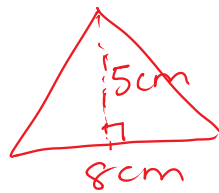
$$A = 11 \times 8 \\ = 88 \text{ cm}^2$$

$$88 \text{ cm}^2 \times 2 \leftarrow \begin{array}{l} \text{left} \\ + \\ \text{right} \end{array} \\ = 176 \text{ cm}^2$$

$$S.A. = 440 + 320 + 176 = 936 \text{ cm}^2$$



Top+Bottom Front



$$A = 8 \times 5 \div 2$$

$$= 20 \text{ cm}^2$$

$$20 \text{ cm}^2 \times 2 \begin{matrix} \swarrow \text{Top} \\ + \\ \swarrow \text{Bottom} \end{matrix}$$

$$= 40 \text{ cm}^2$$



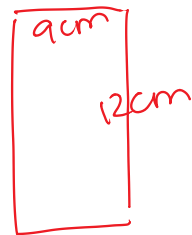
$$A = 12 \times 8$$

$$= 96 \text{ cm}^2$$



$$A = 12 \times 10$$

$$= 120 \text{ cm}^2$$



$$A = 9 \times 12$$

$$= 108 \text{ cm}^2$$

$$SA = 40 + 96 + 120 + 108$$

$$= 364 \text{ cm}^2$$