

Chapter 2: Surface Area

Section 2.3 - Surface area of Prisms

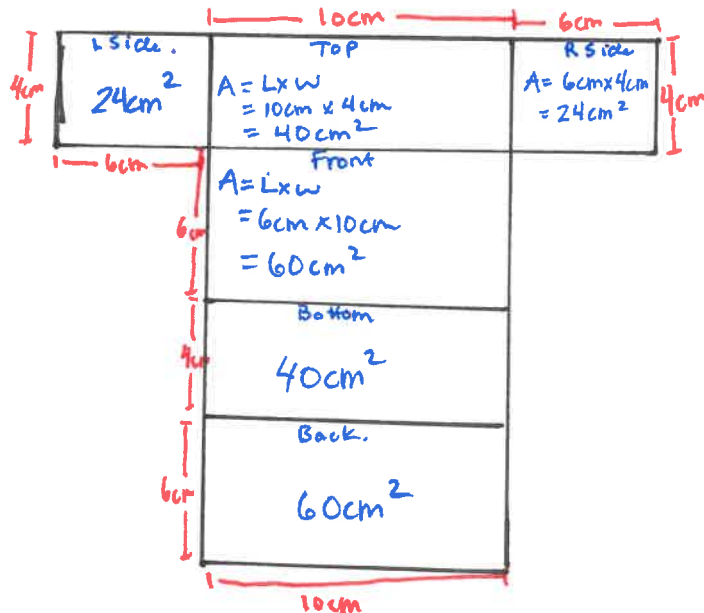
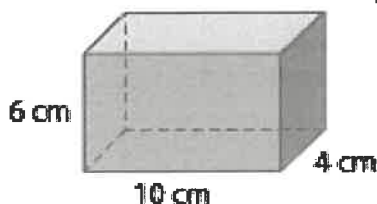
Surface Area

- The number of **SQUARE** units needed to **COVER** a 3D object
- The sum of the **AREAS** of all of the **FACES** of an object

Surface Area of Rectangular Prisms

Method 1 - Net

Find the surface area of the following rectangular prism.



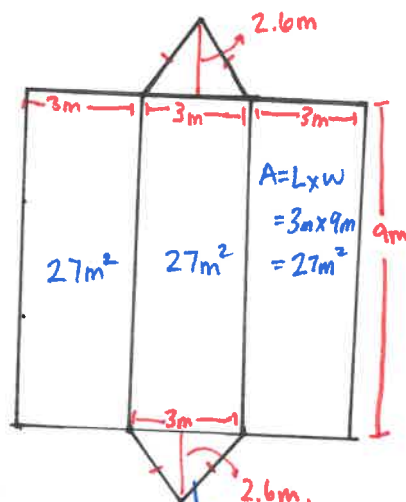
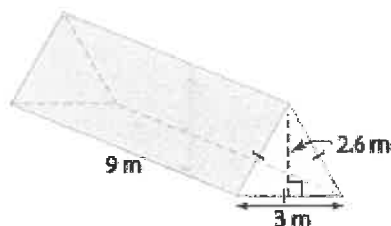
$$SA = \text{Front} + \text{Back} + \text{Top} + \text{Bottom} + \text{R Side} + \text{L Side}.$$

$$SA = 60\text{cm}^2 + 60\text{cm}^2 + 40\text{cm}^2 + 40\text{cm}^2 + 24\text{cm}^2 + 24\text{cm}^2$$

$$SA = \boxed{248\text{cm}^2}$$

Key Points

1. Draw a net of the prism
2. Write the dimensions (measurements) on the correct edges
3. Find the area of each individual face
4. Add the areas up to get the Surface Area



$$SA = 27\text{m}^2 + 27\text{m}^2 + 27\text{m}^2 + 3.9\text{m}^2 + 3.9\text{m}^2$$

$$SA = \boxed{88.8\text{m}^2}$$

$$A = \frac{b \times h}{2}$$

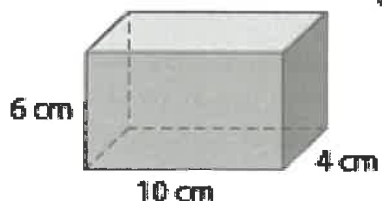
$$= \frac{3\text{m} \times 2.6\text{m}}{2}$$

$$= \frac{7.8}{2} \rightarrow 3.9\text{m}^2$$

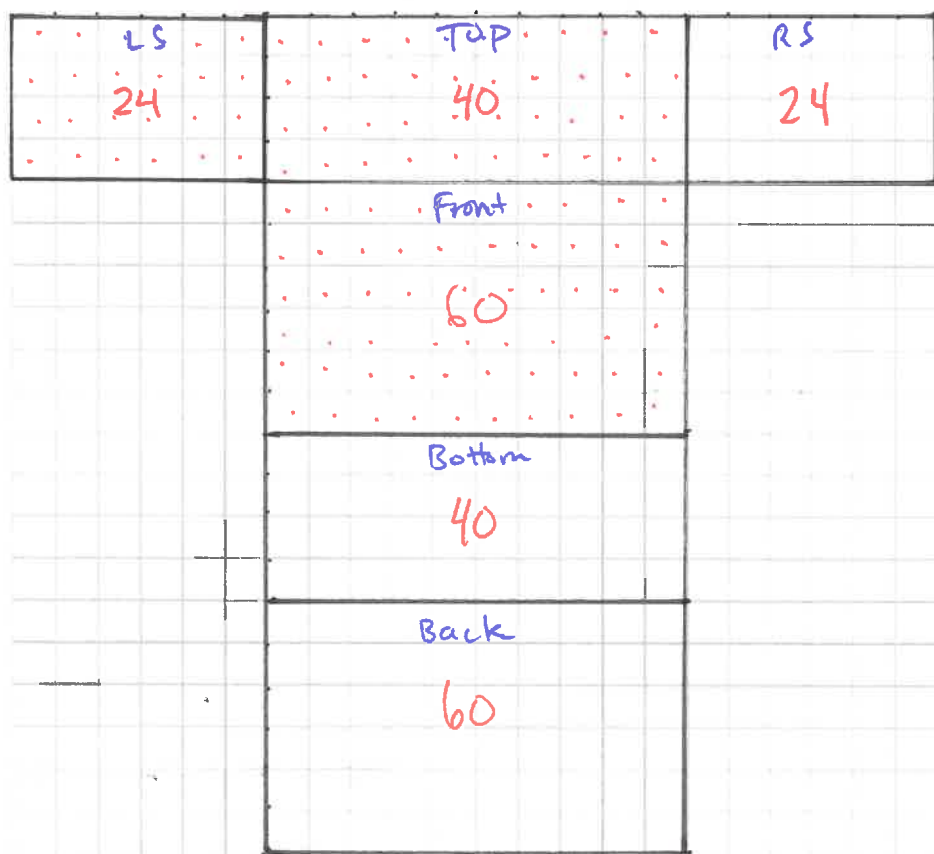
Method 2 - Grid Paper

Key Points

Find the surface area of the following rectangular prism.



1. Draw a net of the prism on grid paper
 - a. Every unit = 1 square (ex. 2 cm = 2 squares)
2. Count the number of square units that cover the net

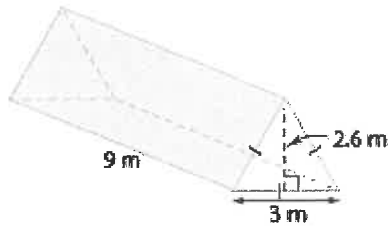


$$SA = 24 + 24 + 40 + 40 + 60 + 60$$

$$SA = 248 \text{ cm}^2$$

Method 2 - Grid Paper**Key Points**

Find the surface area of the following rectangular prism.



1. Draw a net of the prism on grid paper
 - a. Every unit = 1 square (ex. 2 cm = 2 squares)
2. Count the number of square units that cover the net



$$SA = 27 + 27 + 27 + 4 + 4$$

$$= 89 \text{ m}^2$$

