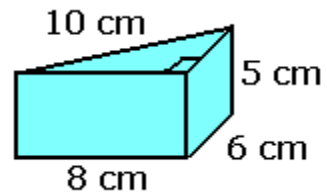


MATC9 Ch3.4 Key Concepts 3 Surface Area of a Prism Worked Example

Example: Find the surface area of the prism shown.

Solution: The sides form three rectangles. The area of these rectangles is calculated

$$\begin{aligned} A &= (6 \times 8) + (5 \times 6) + (5 \times 10) \\ &= 48 + 30 + 50 \\ &= 128 \text{ cm}^2 \end{aligned}$$



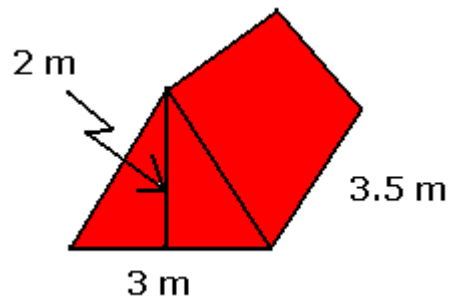
The top and bottom form two triangles, each with a base of 8 cm and a height of 6 cm. The area of these triangles is calculated

$$\begin{aligned} A &= 2 \left(\frac{1}{2} \times 8 \times 6 \right) \\ &= 48 \text{ cm}^2 \end{aligned}$$

The total surface area is $128 + 48 = 176 \text{ cm}^2$.

Practice:

1. Find the surface area of a triangular pup tent as shown.



2. Find the surface area of a wedge of cheese that forms an equilateral prism 12 cm on a side, with a height of 4 cm.



Answers: 1. 34 m^2 2. 268.7 cm^2