

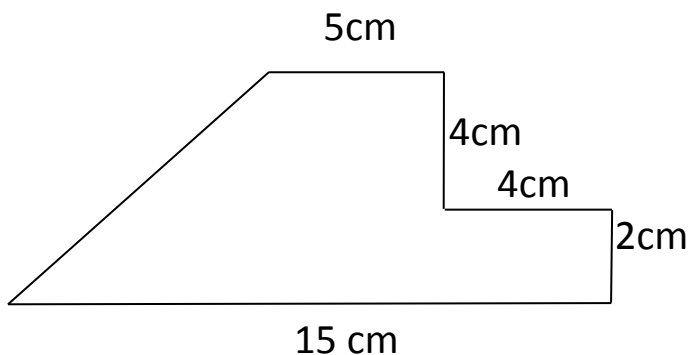
S1 Topic 13: Area and Volume 2

1) Revise how to find the area of a rectangle, square or triangle (Topic 6) and the volume of a cuboid.

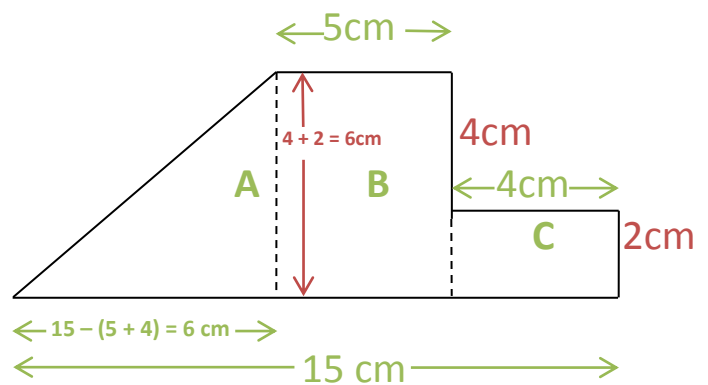
2) Find the area of composite shapes by breaking them down into rectangles and triangles

Problem

Find the area of the shape below.



Solution



$$\begin{aligned} \text{Area of A} &= \frac{1}{2} b \times h \\ &= \frac{1}{2} 6 \times 6 \\ &= \frac{1}{2} \text{ of } 36 \\ &= 18\text{cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Area of B} &= l \times b \\ &= 6 \times 5 \\ &= 30\text{cm}^2 \end{aligned}$$

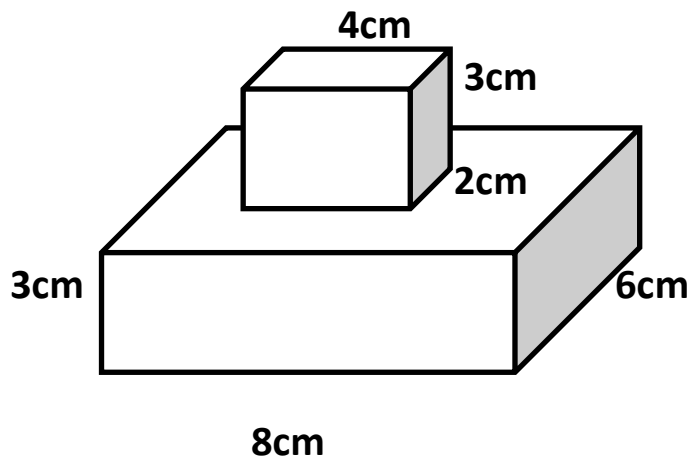
$$\begin{aligned} \text{Area of C} &= l \times b \\ &= 4 \times 2 \\ &= 8\text{cm}^2 \end{aligned}$$

$$\text{TOTAL AREA} = 18 + 30 + 8 = 56\text{cm}^2$$

3) Calculate the volume of composite shapes by breaking them down into cuboids

Problem

Find the volume of the shape below.



Solution

$$\begin{aligned}\text{Volume of upper cuboid} &= l \times b \times h \\ &= 4 \times 2 \times 3 \\ &= 24 \text{ cm}^3\end{aligned}$$

$$\begin{aligned}\text{Volume of lower cuboid} &= l \times b \times h \\ &= 8 \times 6 \times 3 \\ &= 144 \text{ cm}^3\end{aligned}$$

$$\text{Total Volume} = 24 + 144 = 168 \text{ cm}^3$$