

# SURFACE AREA VOLUME OF PRISMS

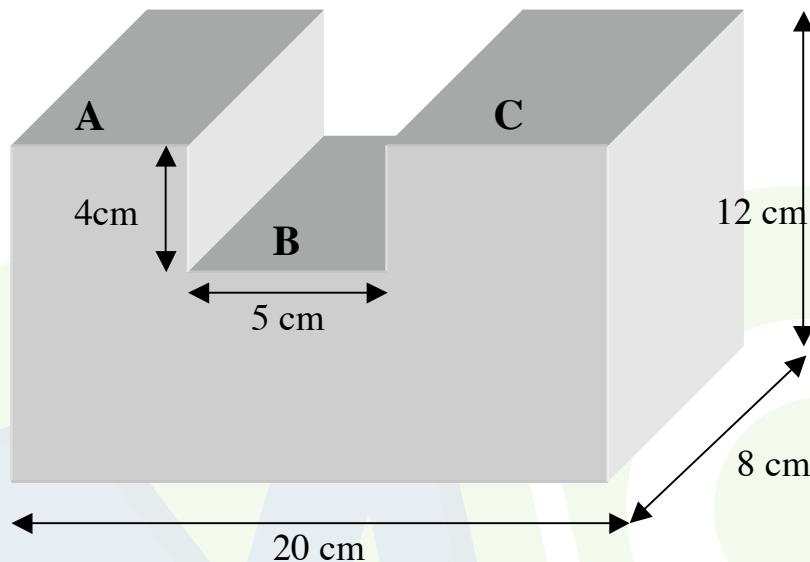
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Edition 1

**Please realise that diagrams are not drawn to scale**

*There are usually angles that you must assume are right angles.*

*There are usually some lengths on the shape that you must deduce.*



*It is a good idea to practice drawing quick sketches of common shapes*

**First work out the perimeter  $P$  and the area  $A$  of the cross section**

**perimeter  $P$  :** First note that the dimensions  $A + B + C = 20$  cm

$$\begin{aligned} \text{Therefore } P &= (2 \times 20 + 2 \times 12 + 2 \times 4) \text{ cm} \\ &= 72 \text{ cm} \end{aligned}$$

$$\begin{aligned} A \text{ (Area)} &= 20\text{cm} \times 12\text{cm} - 5\text{cm} \times 4\text{cm} \\ &= 220\text{cm}^2 \end{aligned}$$

$$\begin{aligned} V &= A \times l \\ &= 220 \times 8 \text{ cm}^3 \\ &= 1760 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{Surface Area} &= P \times l + 2A \\ &= 72 \times 8 + 2 \times 220 \text{ cm}^2 \\ &= 1016 \text{ cm}^2 \end{aligned}$$