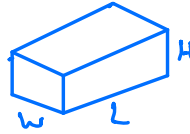


Volume

Volume of a cuboid

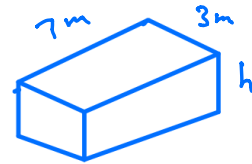
$$= \text{Length} \times \text{Width} \times \text{Height}$$



Classroom
Ex 1 Length 8m
Width 6m
Height 3m

$$\begin{aligned} \text{Volume} &= 8 \times 6 \times 3 \\ &= 144 \text{ m}^3 \end{aligned}$$

Ex 2

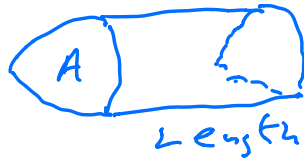


$$\begin{aligned} \text{Volume} &= 42 \text{ m}^3 \\ \text{Find height } h \end{aligned}$$

$$\begin{aligned} V &= L \times W \times H \\ 42 &= 7 \times 3 \times h \\ 42 &= 21h \\ \frac{42}{21} &= h \\ h &= 2 \text{ m} \end{aligned}$$

Volume of a Prism

A prism is a 3-dimensional shape with a uniform cross-section

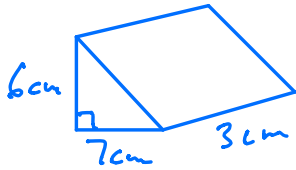


Volume of Prism

$$= \text{Area of Cross-section} \times \text{Length}$$

Exercise 4 D

1 a)

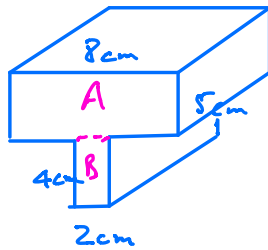


$$\text{Cross-section Area} = \frac{6 \times 7}{2} = 21 \text{ cm}^2$$

$$\text{Length} = 3 \text{ cm}$$

$$\text{Volume} = 21 \times 3 = 63 \text{ cm}^3$$

1 b)



$$\text{Length } 9 \text{ cm}$$

$$A = 8 \times 5 = 40$$

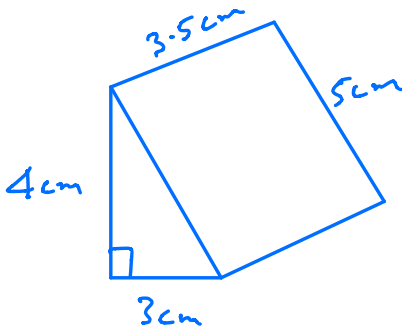
$$B = 4 \times 2 = 8 +$$

$$\text{Cross-Section } 48 \text{ cm}^2$$

$$\begin{aligned} \text{Vol} &= 48 \times 9 \\ &= 432 \text{ cm}^3 \end{aligned}$$

$$\text{Cross-Section} \times \text{Length}$$

Volume and Surface Area of Prism



$$\begin{aligned} \text{Vol} &= \frac{4 \times 3}{2} \times 3.5 \\ &= 21 \text{ cm}^3 \end{aligned}$$

Surface Area consists of
2 Triangles and 3 rectangles

$$\text{Each Triangle} = \frac{4 \times 3}{2} = 6 \text{ cm}^2$$

$$\text{Rectangle Front} = 5 \times 3.5 = 17.5 \text{ cm}^2$$

$$\text{Rectangle Base} = 3 \times 3.5 = 10.5 \text{ cm}^2$$

$$\text{Rectangle Back} = 4 \times 3.5 = 14 \text{ cm}^2$$

$$\text{Surface Area} = 54 \text{ cm}^2$$

TOTAL
SURFACE
AREA

$$17.5$$

$$10.5$$

$$14$$

$$6$$

$$\frac{6}{54 \text{ cm}^2} +$$