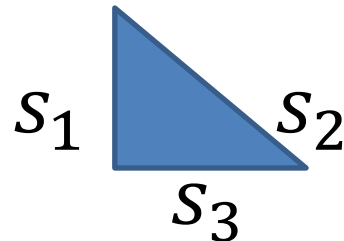


# MATHEMATICS



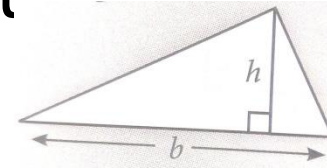
Topic: Area and Perimeter of triangle

- ❖ To find the perimeter of a triangle, we add all three sides: *Perimeter of triangle* =  $s_1 + s_2 + s_3$



- ❖ To find the area a triangle, we halve the product of the base and height:

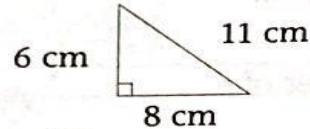
$$\text{area of triangle} = \frac{1}{2}bh$$



# Worked Example

## Example 1

Find the perimeter and area of this triangle:



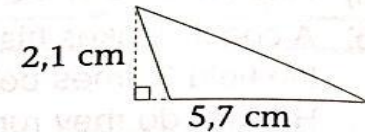
## Solution

$$\text{Perimeter} = 8 + 6 + 11 = 25 \text{ cm}$$

$$\begin{aligned}\text{Area} &= \frac{1}{2} bh \\ &= \frac{1}{2} \times 8 \times 6 \\ &= 24 \text{ cm}^2\end{aligned}$$

## Example 2

Find the area of the triangle below:

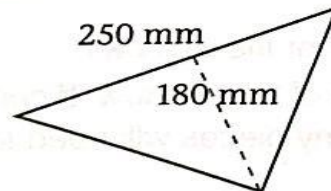


## Solution

$$\begin{aligned}\text{Area} &= \frac{1}{2} bh \\ &= \frac{1}{2} \times 5,7 \times 2,1 \\ &= 5,985 \text{ m}^2\end{aligned}$$

## Example 3

Find the area of the triangle below.  
Give your answer in  $\text{cm}^2$ .



## Solution

$$\begin{aligned}\text{Area} &= \frac{1}{2} bh \\ &= \frac{1}{2} \times 250 \times 180 \\ &= 22\,500 \text{ mm}^2 = 225 \text{ cm}^2\end{aligned}$$

## Example 4

Find the height of a triangle with area  $18 \text{ m}^2$  and base  $40 \text{ cm}$ .

## Solution

$$\begin{aligned}\text{Area} &= \frac{1}{2} bh \\ 18 &= \frac{1}{2} \times 0,4h \\ 18 &= 0,2h \\ h &= 90 \text{ m}\end{aligned}$$

First convert  $40 \text{ cm}$  to metres:  
 $40 \text{ cm} = 0,4 \text{ m}$

# Exercise 16.1 page 200

1.

2.

3.

4.

5.