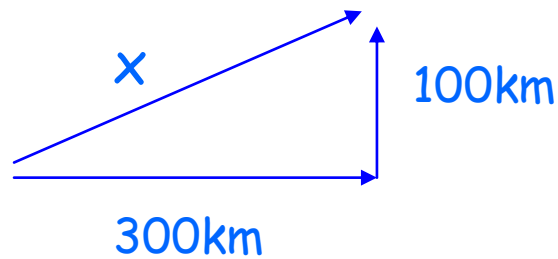


# Pythagoras' Theorem

A ship sails 300km due West, then 100km due South.

At the end of this journey, how far is the ship from its starting position?



$$\begin{aligned} x^2 &= 300^2 - 100^2 \\ &= 90000 - 10000 \\ &= 80,000 \text{ km} \end{aligned}$$

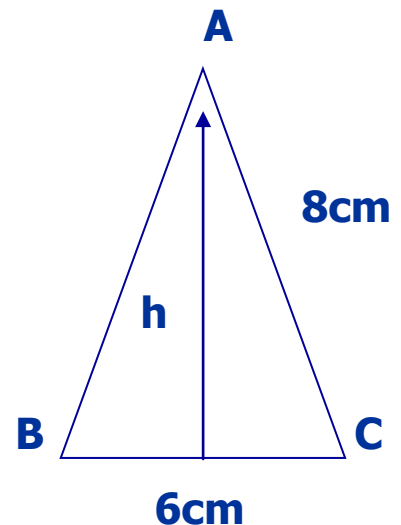
ABC is an isosceles triangle.

a) Calculate the perpendicular height, h.

B) Hence calculate the area of this triangle

$$\begin{aligned} \text{a) } h^2 &= 8^2 + 6^2 \\ &= 64 + 36 \\ &= 100 \end{aligned}$$

$$h = \sqrt{100} = 10\text{cm}$$



$$\text{b) Area} = 6 \times 10 = 60\text{cm}$$