





6.

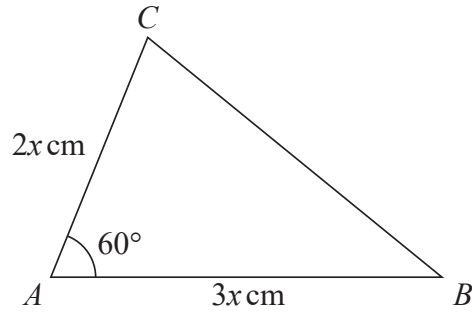


Figure 1

Figure 1 shows a sketch of a triangle  $ABC$  with  $AB = 3x$  cm,  $AC = 2x$  cm and angle  $CAB = 60^\circ$

Given that the area of triangle  $ABC$  is  $18\sqrt{3}$  cm<sup>2</sup>

(a) show that  $x = 2\sqrt{3}$

(3)

(b) Hence find the exact length of  $BC$ , giving your answer as a simplified surd.

(3)

DO NOT WRITE IN THIS AREA

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1.

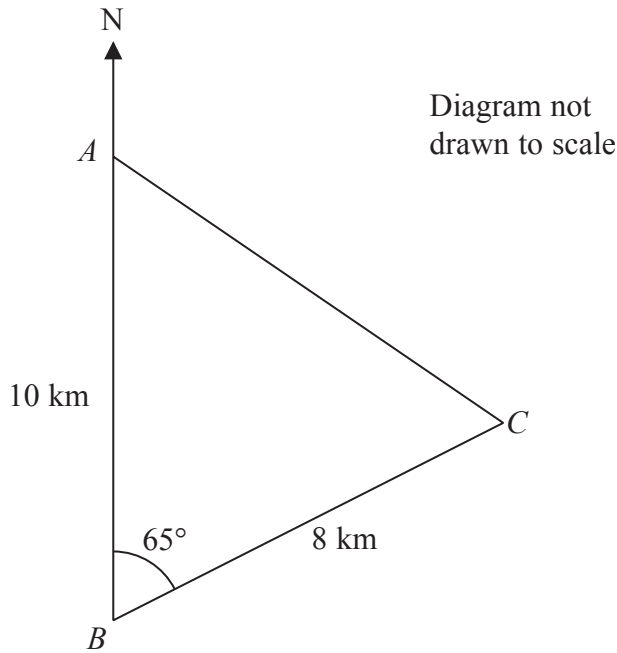


Figure 1

Figure 1 shows the position of three stationary fishing boats *A*, *B* and *C*, which are assumed to be in the same horizontal plane.

Boat *A* is 10 km due north of boat *B*.

Boat *C* is 8 km on a bearing of  $065^\circ$  from boat *B*.

(a) Find the distance of boat *C* from boat *A*, giving your answer to the nearest 10 metres. (3)

(b) Find the bearing of boat *C* from boat *A*, giving your answer to one decimal place. (3)

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