6.

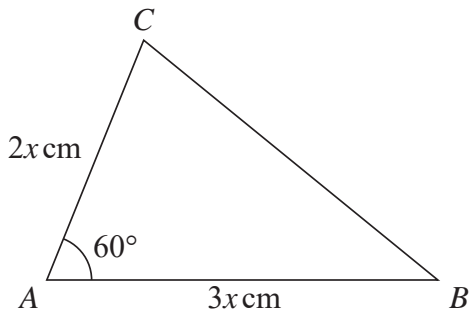**Figure 1**

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

Given that the area of triangle *ABC* is $18\sqrt{3}$ cm²

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

(3)

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

(3)