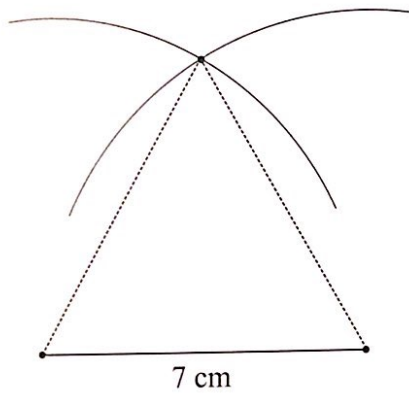


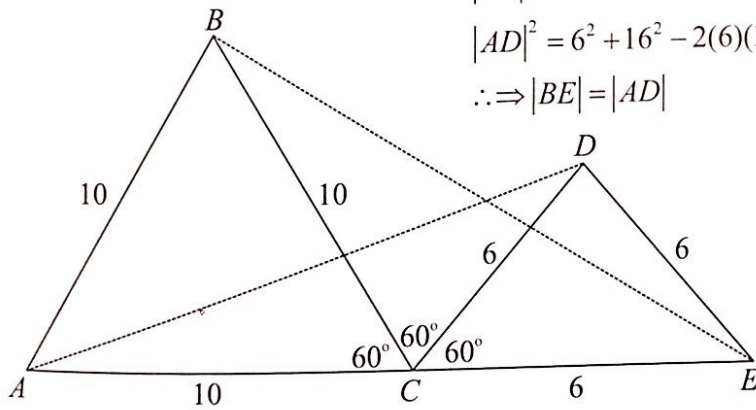
**QUESTION 6 (25 MARKS)**

**Question 6 (a)**



Draw a line of length 7 cm with your ruler.  
 Open your compass to a radius of 7 cm using this line.  
 Placing the point of the compass on each end point of the line draw arcs of radius 7 cm.  
 Draw lines from the end points of the line to the point of intersection of the two arcs.  
 An equilateral triangle of side 7 cm has been constructed.

**Question 6 (b)**



$$|BE|^2 = 10^2 + 16^2 - 2(10)(16)\cos 60^\circ = 196 \Rightarrow |BE| = 14$$

$$|AD|^2 = 6^2 + 16^2 - 2(6)(16)\cos 60^\circ = 196 \Rightarrow |AD| = 14$$

$$\therefore \Rightarrow |BE| = |AD|$$

**Question 6 (c)**

Triangles  $ACD$  and  $BCE$  are congruent (SAS).

