

**MARKING SCHEME NOTES**

**Question 6A (a)**

**Diagram [Scale 5B (0, 2, 5)]**

2: • Effort at *Diagram* or *Given*

**Construction [Scale 5B (0, 2, 5)]**

2: • Construction attempted  
• Construction not explained or explanation incomplete

**Proof [Scale 10C (0, 3, 7, 10)]**

3: • More than one critical step omitted but still some substantial work of merit  
7: • Proof completed with one critical step omitted

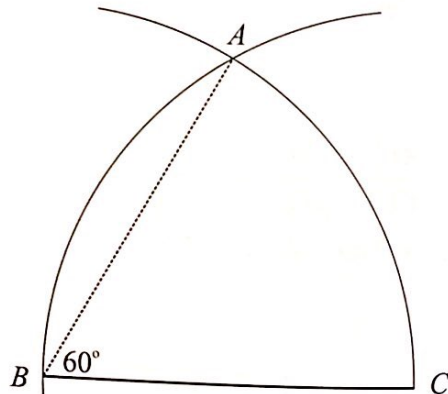
**Question 6A (b)**

Put point of compass on  $B$  and stretch it to  $C$ .  
Draw an arc as shown.

Now put the point on  $C$  and draw the arc as shown.

$A$  is where the two arcs meet. Triangle  $ABC$  is an equilateral triangle where each angle is  $60^\circ$ .

Draw the line  $BA$ . Angle  $ABC$  is a  $60^\circ$  angle.



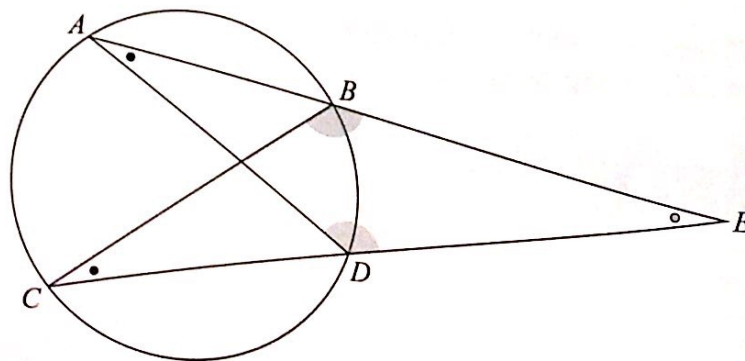
**MARKING SCHEME NOTES**

**Question 6A (b) [Scale 5B (0, 2, 5)]**

2: • Arc  $AC$  and/or arc  $AB$   
• Effort at drawing arc from  $B$

**QUESTION 6B (25 MARKS)**

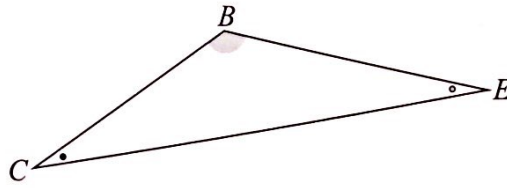
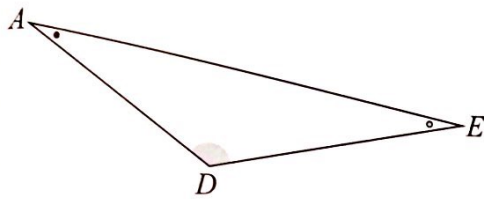
**Question 6B (a)**



$\triangle ADE$  and  $\triangle CEB$  are similar triangles because:

- $|\angle EAD| = |\angle ECB|$  [Angles standing on the same arc are equal]
- $|\angle AED| = |\angle CEB|$  [Common angle]
- $|\angle EDA| = |\angle EBC|$  [3 angles in a triangle add up to  $180^\circ$ ]

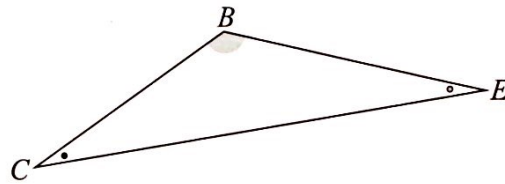
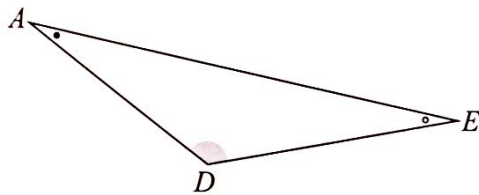
**Question 6B (b)**



$$\frac{|EA|}{|EC|} = \frac{|ED|}{|EB|} \quad [\text{The sides of similar triangles are proportional}]$$

$$\therefore |EA| \cdot |EB| = |EC| \cdot |ED|$$

**Question 6B (c)**



$$\frac{|EB|}{|ED|} = \frac{|CB|}{|AD|}$$

$$\therefore |AD| = \frac{|ED| \cdot |CB|}{|EB|} = \frac{5.94 \times 10}{6.25} = 9.504$$

**MARKING SCHEME NOTES**

**Question 6B (a) [Scale 10C (0, 3, 7, 10)]**

- 3: • Triangles named
- 7: • Two pairs of angles in relevant triangles identified but justification incomplete
- Two pairs of angles identified with justification but triangles not named

**Question 6B (b) [Scale 10C (0, 3, 7, 10)]**

- 3: • Relevant triangles identified
- Partly correct ratio
- 7: • Correct ratio established but fails to complete

**Question 6B (c) [Scale 5C (0, 2, 3, 5)]**

- 2: • Effort at establishing ratio
- 3: • Ratio established and values entered