

Question number	Scheme	Marks
3	$33 = \frac{1}{2} \times 11 \times 12 \times \sin \angle ABC \Rightarrow \sin \angle ABC = \frac{1}{2} \quad [30^\circ \text{ or } 150^\circ]$ $AC = \sqrt{11^2 + 12^2 - 2 \times 11 \times 12 \cos 30^\circ} = 6.0306... \approx 6.03 \text{ (cm)}$ $AC = \sqrt{11^2 + 12^2 - 2 \times 11 \times 12 \cos 150^\circ} = 22.2178... \approx 22.2 \text{ (cm)}$	M1A1 M1A1 A1 [5]
Total 5 marks		
M1	Use of $\frac{1}{2}ab \sin C = 33$ (must be set = 33)	
A1	30° and 150° (Accept $\frac{\pi}{6}$ and $\frac{5\pi}{6}$)	
M1	Use of $c^2 = a^2 + b^2 - 2ab \cos C$ (square root not required for M1)	
A1	6.03	
A1	22.2	
	NB If both answers are not given to 3sf but are correct then award A1A0	