

Question			Answer	Marks	AO	Guidance	
1	(a)		$BC^2 = 6^2 + 15^2 - 2 \times 6 \times 15 \times \cos 30^\circ$	<b>M1</b>	<b>1.1a</b>	Attempt use of cosine rule	Allow either omission of 2, or + not -, but no other errors Allow other fully complete methods, such as basic trigonometry, possibly combined with Pythagoras  If > 3sf then allow 10.25, or answers that round to 10.25 Condone no units
			$BC = 10.3 \text{ cm}$	<b>A1</b>	<b>1.1</b>	Obtain 10.3cm, or better	
				[2]			
1	(b)		$\frac{\sin 30}{4} = \frac{\sin D}{6}$	<b>M1</b>	<b>1.1</b>	Attempt use of sine rule	Correct equation seen, with fractions either way up Could also be implied by method eg $\sin^{-1}(0.75)$ is <b>M1</b> , but just 0.75 is <b>M0</b> Allow other fully complete methods  $D = 48.590377\dots$ Allow $D = 0.848$ radians  $D = 131.409622\dots$ <b>A0</b> if additional angles given as well Allow $D = 2.29$ radians (could be FT on incorrect acute angle in radians, as long as $D < 2.618$ )
			$D = 48.6^\circ$	<b>A1</b>	<b>1.1</b>	Obtain $D = 48.6^\circ$ , or better	
			or $D = 131^\circ$	<b>A1FT</b>	<b>3.1a</b>	Obtain $D = 131^\circ$ , or better FT their first angle as long as $< 150^\circ$	
				[3]			