

1(a)	$\frac{1}{2} \times 9.7 \times 3.8 \times \sin 73^\circ$ or 17.6...	M1	oe
	their 17.6... $\times 6 \div 8.5$ or 105.7... $\div 8.5$ or 12.4...	M1dep	oe
	13	A1	
	Additional Guidance		
	$\frac{1}{2} \times 9.7 \times 3.8 = 18.43$ $18.43 \times 6 \div 8.5 = 13.0...$		MOMOA0
1(b)	$9.7^2 + 3.8^2 - 2 \times 9.7 \times 3.8 \times \cos 73^\circ$ or $94.09 + 14.44 - 73.72 \cos 73^\circ$ or 86.976... or 86.98 or 87	M1	oe
	$\sqrt{\text{their } 86.976...}$	M1dep	
	9.3(2...) or 9.33	A1	
	$\frac{\sin x}{\text{their } 9.32...} = \frac{\sin 42}{8}$ or $\sin^{-1}[0.7778, 0.7804]$	M1	oe their 9.32... must be their length of the vertical line
	[51, 51.3]	A1ft	ft their 9.3(2...) or 9.33
	Additional Guidance		
	Their 9.32... must come from M1M1 or be clearly identified in working or on the diagram as the length of the vertical line		

Question	Answer	Mark	Comments
2(a)	Correct explanation	B1	eg 35 is more than $17 + 13$
	Additional Guidance		
	It is more than 30		B1
	AB cannot be more than $AC + BC$		B1
	$AC + BC$ only add up to 30		B1
	The triangle inequality		B1
	$17 + 13$ is only 30		B1
	$17 + 13$ is 30		B0
	It would be too long		B0

Question	Answer	Mark	Comments
2(b)	Correct explanation	B1	eg (it should be) $\frac{31}{\sin x}$
	Additional Guidance		
	x and 31 should be swapped		B1
	She has used 31 as an angle		B1
	She has used x as a length		B1
	It should be $\frac{\sin x}{31} \left(= \frac{\sin 72}{54} \right)$		B1

Q	Answer	Mark	Comments
3	True Not true Not true True	B4	B1 each correct answer
	Additional Guidance		
	Allow a cross if it's the only answer in that row		
	If one tick and one or two crosses are given in a row, mark the tick		

Q	Answer	Mark	Comment
4	7.15 or 7.25 or 13.55 or 13.65 or 109.5 or 110.5	B1	
	7.25 and 13.65 and 109.5 chosen	B1	
	$0.5 \times \text{their } 7.25 \times \text{their } 13.65 \times \sin$ their 109.5	M1	their 7.25 must be [7.2, 7.25] their 13.65 must be [13.6, 13.65] their 109.5 must be [109.5, 110] or 110.5
	46.6(4...) with correct bounds seen	A1ft	condone 47 with B1B1 scored ft their three bounds within M1 ranges which are not 7.2 or 13.6 or 110
	Additional Guidance		
	Accept 7.249 for 7.25 or 13.649 for 13.65 or 110.49 for 110.5		
	7.25 and 13.65 and 110.5 used and answer 46.3...		B1B0M1A1ft
	7.25 and 13.65 and 110 used and answer 46.497... or 46.5		B1B0M1A0ft
	7.2 and 13.6 and 110 used, with or without answer 46(.0...)		B0B0M1A0ft
	46.6(4...) or 47 with no working		B0B0M0A0