Question		Working	Answer	Mark	Notes
16	(a)	$(BC^2 =)25^2 + 73^2 - 2\times25\times73\times\cos65$ oe **or** $(BC =)\sqrt{25^2 + 73^2 - 2\times25\times73\times\cos65}$ **OR** $(BN =)25\sin65 (= 22.6(576...))$ oe **and** $(NC = AC - AN =)73 - 25\cos65 (= 62.4(345...))$ oe		3	M1 for values correctly substituted into the cosine rule **OR** finding the perpendicular height of the triangle and NC where N is the foot of the perpendicular on AC Allow truncated or rounded values for $AN = 25\cos65 = 10.5(654\ldots)$
		Eg $25^2 + 73^2 - 1542(.556)$ **or** $625 + 5329 - 1542(.556)$ **or** $5954 - 1542(.556...)$ **or** $4411(.4433\ldots)$ **OR** $"22.6..."^2 + "62.4..."^2$ **or** $513.(37\ldots) + 3898.(07\ldots)$			M1 clear evidence of correct order of operations used for the cosine rule (these calculations may be square rooted) **OR** a correct statement for BC^2 using Pythagoras from finding BN and NC
		Correct answer scores full marks (unless from obvious incorrect working)	66.4		A1 accept an answer in the range 66.3 – 66.5
	(b)	$\frac{1}{2}\times25\times73\times\sin65$ oe **or** $\frac{1}{2}\times"22.6"\times73$ oe **or** $\frac{1}{2}(25\cos65\times25\sin65) + \frac{1}{2}((73 - 25\cos65)\times25\sin65)$ oe **or** $119(.694...) + 707(.311...)$ oe		2	M1
		Correct answer scores full marks (unless from obvious incorrect working)	827		A1 Accept an answer in the range 824 – 829
					Total 5 marks