Question			Answer	Marks	AO	Guidance	
2	(a)		$(p^2 =)(4+h)^2+(4-h)^2-2(4+h)(4-h)\cos 60$	M1	1.1	Correct application of cosine rule	
			$=(16+8h+h^2)+(16-8h+h^2)-(16-h^2)$				
			$p^2=16+3h^2$	A1	2.2a	**AG –** at least one line of intermediate working (must have $p^2=...$)	Any errors or missing brackets then **A0**
				[2]			
2	(b)		$(16+3h^2)^{\frac{1}{2}}=4(1+...)^{\frac{1}{2}}$	B1	1.1	For reference: $4\left(1+\frac{3}{16}h^2\right)^{\frac{1}{2}}$	or for $16^{\frac{1}{2}}(1+...)^{\frac{1}{2}}$
			$(1+kh^2)^{\frac{1}{2}}=1+\frac{1}{2}kh^2+...$	M1	1.1	Correct first two terms for their k	$k\neq 1$
			$...+\frac{\left(\frac{1}{2}\right)\left(-\frac{1}{2}\right)}{2!}(kh^2)^2$	A1ft	1.1	Correct third term following through their k	
			$(p=)4+\frac{3}{8}h^2-\frac{9}{512}h^4+...$	A1	1.1	$\lambda=\frac{3}{8},\mu=-\frac{9}{512}$ (oe)	**SC** if candidates assume that $p=4+\lambda h^2+\mu h^4$ and then substitute into $p^2=16+3h^2$ to find λ and μ then **B1** for correct λ and **B1** for correct μ (so 2/4 max.)
				[4]			