

Q	Marking Instructions	AO	Marks	Typical Solution
6	Translates given information into an equation by using the formula for the area of triangle or parallelogram to form a correct equation	AO3.1a	M1	$AB \times AD \times \sin \alpha = 24$ <p>hence $6 \times 4.5 \times \sin \alpha = 24$</p>
	Rearranges 'their' equation to obtain a correct value of $\sin \alpha$	AO1.1b	A1F	$\sin \alpha = \frac{24}{27} = \frac{8}{9}$
	<p>Uses 'their' $\sin \alpha$ value to identify an appropriate right-angled triangle</p> <p>or uses identities</p> <p>and deduces exact ratio of $\tan \alpha$ – positive or negative</p> <p>Condone only positive ratio seen</p>	AO2.2a	M1	<p>Sides of right angled triangle are 8, 9 and $\sqrt{17}$</p> <p>Hence $\tan \alpha = \pm \frac{8}{\sqrt{17}}$</p>
	<p>Relates back to mathematical context of problem and hence chooses negative ratio – accept any equivalent exact form</p> <p>FT 'their' tan values for obtuse α</p>	AO3.2a	A1F	<p>α is one of the largest angles and must be obtuse hence tangent is negative</p> $\tan \alpha = -\frac{8}{\sqrt{17}} = -\frac{8\sqrt{17}}{17}$
Total			4	