Question number	Scheme		Marks
6	Correctly identifies the angle VXO where X is the midpoint of CD and O is the foot of the perpendicular from V There are other valid triangles that can be used.		B1
	$VC = a$ and $CX = \frac{a}{2}$ note could also be $2a$ and a or could use values where VC is twice the length of CX		M1
	$((VX)^2) = a^2 - \left(\frac{a}{2}\right)^2$	$((VO)^2) = \sqrt{a^2 - \left(\frac{\sqrt{2}}{2}a\right)^2}$	dM1
	$VX = \frac{\sqrt{3}a}{2}$ oe	$VO = \frac{\sqrt{2}}{2}a$ oe	A1
	$\cos\theta = \frac{\frac{a}{2}}{\frac{\sqrt{3}a}{2}}$ oe	$\tan\theta = \frac{\frac{\sqrt{2}a}{2}}{\frac{a}{2}}$ oe	M1
	$\left[\cos\theta = \frac{1}{\sqrt{3}}\text{oe}\right.$ $\left.\text{leading to } \theta = \right]$	$\left[\tan\theta = \sqrt{2}\right.$ $\left.\text{leading to } \theta = \right]$	
	54.7	54.7	A1
			Total 6 marks

Part	Mark	Additional Guidance
	B1	Angle identified in written work or on diagram. Allow labelling to be any letters.
	M1	Denotes any side of the pyramid with a and any appropriate length on the base $\frac{a}{2}$. This can be in written work or on the diagram. The two sides can be any two sides (including values) which will form a triangle with the required angle and must be used in the work that follows (even if incorrectly). Allow if the candidate denotes any side of the pyramid with a and identifies AO as $\frac{\sqrt{2}a}{2}$ oe
	dM1	Uses Pythagoras with a minus sign in a correct triangle with correctly labelled sides.
	A1	Correct expression for their correct choice of sides oe.
	M1	Working in triangle VXO (or other valid triangle) with their values from previous working, using any appropriate trigonometry.
	A1	Awrt 54.7