

Q	Marking Instructions	AO	Marks	Typical Solution
4	Solves to find $\tan 2\theta$ (allow M1 even if only $+\sqrt{3}$ given PI by any correct final value of θ)	AO1.1a	M1	$\tan 2\theta = \pm\sqrt{3}$
	Obtains at least 3 correct final values for θ ignore extra incorrect terms or terms outside range	AO1.1b	A1	$\tan 2\theta = \sqrt{3} \rightarrow 2\theta = 60^\circ, 240^\circ, 420^\circ, 600^\circ$
	Obtains at least 3 correct final values of θ from $\tan 2\theta = \sqrt{3}$ and at least 3 correct values from $\tan 2\theta = -\sqrt{3}$ ignore extra incorrect terms or terms outside range	AO1.1a	M1	$\tan 2\theta = -\sqrt{3} \rightarrow 2\theta = 120^\circ, 300^\circ, 480^\circ, 660^\circ$
	Obtains complete set of exactly 8 correct values for θ	AO1.1b	A1	$\theta = 30^\circ, 60^\circ, 120^\circ, 150^\circ, 210^\circ, 240^\circ, 300^\circ, 330^\circ$
	Total			4