Question	Answer	Marks	Guidance
6	$2x + 6y + 1 = 0$ final answer	**A2**	**A1** for correct equation in a different form isw e.g. $y-\frac{1}{4}=-\frac{1}{3}\left(x+\frac{5}{4}\right)$ or $y=-\frac{1}{3}x-\frac{1}{6}$ or $\frac{y-0.25}{x+1.25}=-\frac{7}{21}$ or $x+3y+\frac{1}{2}=0$ or $2x + 6y = -1$ oe OR **A1 FT** *their* perpendicular bisector for a final answer in the form $ax + by + c = 0$ **Dep** on previous **M1 M1 and** an attempt to find the perpendicular bisector
7	$(1 + \tan^2 3x) + \tan 3x - 3 \ [=0]$	**M1**	Uses $\sec^2 3x = 1 + \tan^2 3x$
	$\tan^2 3x + \tan 3x - 2 \ [= 0]$	**A1**	Writes in solvable form
	$(\tan 3x + 2)(\tan 3x - 1) \ [= 0]$ $\tan 3x = -2, \ \tan 3x = 1$	**M1**	Factorises or solves their 3-term quadratic in $\tan 3x$
	Correct triple angle: $3x = 116.6$ or 296.6 or 45 or 225	**A1**	
	$[x =]$ 15, 75, 38.9 or 38.85[5…] 98.9 or 98.85[5…] and no extras in range $0 \leqslant x \leqslant 120$	**A2**	**A1** for any two correct angles, ignoring extras in range

Question	Answer	Marks	Guidance
8(a)	$\frac{\pi}{3}$	**2**	**M1** for angle AOB: $\frac{2\pi}{3}$ or angle AQO: $\frac{\pi}{6}$ or angle OAB: $\frac{\pi}{6}$ or e.g. $\cos(AOB) = -\frac{1}{2}$ or $\sin\left(\frac{1}{2}AOB\right) = \frac{\sqrt{3}}{2}$ or AQ or $BQ = 2\sqrt{3}$ If 0 scored, **SC1** for answer of 1.047 rads

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