	Question		Answer	Marks	AO	Guidance
8	**(a)**		**DR** $(x-1)^2-1+(y+2)^2-4=20$	**M1** **A1**	**3.1a** **1.1b**	Attempt to complete the square for at least one variable Fully correct. Need not be simplified
			Centre $(1, -2)$	**A1**	**1.1b**	FT their completed square form
			Radius 5	**A1**	**1.1b**	cao
				[4]		
8	**(b)**		**DR** Rewrite equation of the line $x=10-3y$	**B1**	**3.1a**	soi
			Substitute $(10-3y-1)^2+(y+2)^2=25$	**M1**	**1.1a**	Attempt to form quadratic in y only Allow either form of the equation used
			$10y^2-50y+60=0$	**M1**	**1.1a**	Attempt to simplify the quadratic to 3 terms
			$y=2,\ 3$	**A1**	**1.1b**	Both roots seen
			So points of intersection at $(4, 2)$ and $(1,3)$	**A1**	**1.1b**	FT their y-values. No extra points ISW $(2, 4)$ and $(3,1)$ if $x=4$ and $x=1$ seen matched to their y
			Alternative method Rewrite equation of the line $y=\dfrac{10-x}{3}$	**B1**		soi
			Substitute into equation of the circle $x^2+\left(\dfrac{10-x}{3}\right)^2-2x+4\left(\dfrac{10-x}{3}\right)-20=0$	**M1**		Attempt to form quadratic in x only Allow either form of the equation used
			$\dfrac{10}{9}x^2-\dfrac{50}{9}x+\dfrac{40}{9}=0$	**M1**		Attempt to simplify the quadratic to 3 terms
			$x=1,\ 4$	**A1**		Both roots seen
			So points of intersection at $(1,3)$ and $(4, 2)$	**A1**		FT their x-values No extra points Do not allow for $(2, 4)$ and $(3,1)$
				[5]		