Question	Answer	Marks	Guidance
4	$5x^2-8x-4\ \ (=0)$ or $5y^2-36y-305\ \ (=0)$	**M1**	For attempt to eliminate one variable to obtain a 3 term quadratic equation (= 0). Allow one sign error.
	$x=-\frac{2}{5},\ x=2$ $y=-\frac{61}{5},\ y=-5$	**3**	**Dep M1** for attempt to solve *their* quadratic equation **A1** for any correct pair **A1** for a second correct pair.
	Mid-point $\left(\frac{4}{5},\ -\frac{43}{5}\right)$	**M1**	For attempt to find mid-point using *their* coordinates
	Gradient of perpendicular = $-\frac{1}{3}$	**B1**	
	$y+\frac{43}{5}=-\frac{1}{3}\left(x-\frac{4}{5}\right)$	**M1**	For attempt to find the equation of the perpendicular bisector using *their* perpendicular gradient and *their* midpoint. Allow alternative methods
	$a=-1$	**A1**	
5(a)	$x^{20}-40x^{16}+720x^{12}$	**3**	**B1** for each correct term
5(b)	$\left(x^4+4+\frac{4}{x^4}\right)$	**B1**	Allow unsimplified
	$\left(4\times their\ -40\right)+4+their720$ soi	**M1**	Must have 3 terms
	564	**A1**	
6(a)	$\frac{1}{2}r^2\theta=25$ $\theta=\frac{50}{r^2}$	**B1**	
	$P=2r+\frac{50}{r}$	**2**	**M1** for use of $P=2r+r\theta$ with attempt to eliminate θ