Question	Answer	Marks	Guidance
4(b)	$\left(2\left((2x+1)^{\frac{1}{2}}+4\right)+1\right)^{\frac{1}{2}}+4$	**B1**	
	$(2x+1)^{\frac{1}{2}}=8$	**B1**	**Dep**
	$x = 31.5$ oe	**B1**	**Dep** on both previous **B** marks
	Alternative		
	g(x) = 9, x = 12	**(B1)**	
	g(x) = 12	**(B1)**	**Dep**
	x = 31.5 oe	**(B1)**	**Dep** on both previous **B** marks
5(a)	$\frac{\text{cosec}^2\theta}{\cot^2\theta}=\frac{1}{\sin^2\theta}\times\frac{\sin^2\theta}{\cos^2\theta}$ $=\frac{1}{\cos^2\theta}=\sec^2\theta$	**B1**	Sufficient detail is needed Do not award if θ is consistently omitted
	Alternative 1		
	$\frac{\frac{\sin^2\theta+\cos^2\theta}{\sin^2\theta}}{\frac{\cos^2\theta}{\sin^2\theta}}$ $=\frac{1}{\cos^2\theta}=\sec^2\theta$	**(B1)**	Sufficient detail is needed Do not award if θ is consistently omitted
	Alternative 2		
	$\frac{1}{\cot^2\theta}+1$ $\tan^2\theta+1$	**(B1)**	Sufficient detail is needed Do not award if θ is consistently omitted
5(b)	$\sec^2\theta$	**B1**	
5(c)	$\int\left(\sec^2\theta-\sin\theta\right)\text{d}\theta$ soi	**B1**	
	$\tan\theta+\cos\theta$	**B2**	**B1** for each
	$\sqrt{3}-\frac{1}{2}$ or exact equivalent	**B1**	**Dep** on 3 previous **B** marks
6(a)	$x^{10}+20x^7+180x^4$	**3**	**B1** for each correct term