Question	Answer	Marks	Guidance
6	$k(5x+2)^{\frac{3}{5}}$	**M1**	
	$f'(x)=\frac{1}{3}(5x+2)^{\frac{3}{5}} \quad (+c)$	**A1**	Condone omission of c
	$\frac{17}{3}=\frac{1}{3}(32)^{\frac{3}{5}}+c$ oe	**M1**	**Dep** for use of $f'(6)$ and attempt to evaluate c
	$c=3$	**A1**	
	$k(5x+2)^{\frac{8}{5}}$	**M1**	
	$\frac{1}{24}(5x+2)^{\frac{8}{5}}+cx$	**A1**	**FT** on *their c*
	$\frac{26}{3}=\frac{1}{24}(32)^{\frac{8}{5}}+d+((3\times6))$ oe	**M1**	**Dep** for use of $f(6)$ and attempt to evaluate d.
	$[f(x)] =\frac{1}{24}(5x+2)^{\frac{8}{5}}+3x-20$	**A1**	
7(a)(i)	154 440	**B1**	
7(a)(ii)	124 200	**2**	**B1** for ${}^{10}P_5$
	Alternative method		
	124 200	**2**	**B1** for 1 symbol: 75 600 2 symbols: 43 200 3 symbols: 5400
7(b)	$16(n-11)=12(n+1)$ oe	**B2**	**B1** for correct numbers or correct factors must be using combinations
	$n=47$	**B1**	**Dep** on both previous **B** marks Must be the only solution