Question	Answer	Marks	Guidance
9(b)	$-\frac{1}{2}\cos\left(2x+\frac{\pi}{3}\right)+\frac{1}{2}\sin 2x-x$	**3**	**B1** for $-\frac{1}{2}\cos\left(2x+\frac{\pi}{3}\right)$ **B1** for $+\frac{1}{2}\sin 2x$ **B1** for $-x$
	$\left(-\frac{1}{2}\cos\pi+\frac{1}{2}\sin\frac{2\pi}{3}-\frac{\pi}{3}\right)$ $-\left(-\frac{1}{2}\cos\frac{\pi}{3}\right)$	**M1**	For correct use of limits in *their* integral, must have at least one **B1** term
	$\frac{3}{4}+\frac{\sqrt{3}}{4}-\frac{\pi}{3}$	**A1**	
10(a)	$a+d=8$ $a+3d=18$	**2**	**B1** for both equations **M1** for attempt to solve *their* equations
	$a=3,\ \ d=5$	**A1**	For both
	$\frac{n}{2}\left(6+(n-1)5\right)>1560$	**M1**	For correct use of sum formula with *their a* and *d*, allow equality
	$5n^2+n-3120>0$	**M1**	For attempt to solve, allow equality, to obtain at least one critical value
	Positive critical value 24.9 25terms	**A1**	
10(b)(i)	$\frac{a}{1-r}=72$ and either $a+ar+ar^2=\frac{333}{8}$ or $\frac{a\left(1-r^3\right)}{1-r}=\frac{333}{8}$	**B1**	For both
	$a=72(1-r)$ and $a\left(1+r+r^2\right)=\frac{333}{8}$ oe $72(1-r)\left(1+r+r^2\right)=\frac{333}{8}$ or $72\left(1-r^3\right)=\frac{333}{8}$	**M1**	For attempt to obtain an equation in terms of *r* only
	$1-r^3=\frac{333}{576}$	**A1**	
	$r=0.75$	**2**	**M1** for attempt to solve *their* equation in *r*

Question	Answer	Marks	Guidance
10(b)(ii)	$a = 18$	**B1**	**FT** on their r provided $\lvert r \rvert < 1$