Question	Answer	Marks	Guidance
2(a)	$\frac{20}{2}\left(2\times -20+(20-1)\times 5\right)$ or $\frac{20}{2}\left(-20+75\right)$	**M1**	Correct use of either S_{20} formula with $a=-20$ and $d=5$.
	550	**A1**	
		2	
2(b)	$\frac{2k}{2}\left(-40+(2k-1)\times 5\right)$ or $\frac{k}{2}\left(-40+(k-1)\times 5\right)$	**M1***	Correct use of S_n formula with $a=-20$, $d=5$ and either k or $2k$. This mark can be awarded for clear use of $\frac{n}{2}(a+l)$ when correct values of a and d are used.
	$\left[-40k+10k^2-5k=-200k+25k^2-25k\Rightarrow\right]\ 15k^2-180k=0$	**DM1**	Equating their S_{2k} to 10 × *their* S_k and reaching a 2-term quadratic or 2 term linear equation if k has been cancelled. Condone errors in simplification.
	$k=12$	**A1**	Condone extra solution $k=0$.
		3	