Question	Scheme	Marks	AOs
11	Arithmetic sequence, $T_2 = 2k$, $T_3 = 5k - 10$, $T_4 = 7k - 14$		
	$(5k-10)-(2k)=(7k-14)-(5k-10) \Rightarrow k = ...$	M1	2.1
	$\{3k - 10 = 2k - 4 \Rightarrow\}\quad k = 6$	A1	1.1b
	$\{k = 6 \Rightarrow\}\ T_2 = 12$, $T_3 = 20$, $T_4 = 28$. So $d = 8$, $a = 4$	M1	2.2a
	$S_n = \frac{n}{2}\left(2(4) + (n-1)(8)\right)$	M1	1.1b
	$= \frac{n}{2}\left(8 + 8n - 8\right) = 4n^2 = (2n)^2$ which is a square number	A1	2.1
		(5)	
			(5 marks)

Question 11 Notes:

M1:	Complete method to find the value of k
A1:	Uses a correct method to find $k = 6$
M1:	Uses their value of k to deduce the common difference and the first term $(\neq T_2)$ of the arithmetic series.
M1:	Applies $S_n = \frac{n}{2}\left(2a + (n-1)d\right)$ with their $a \neq T_2$ and their d.
A1:	Correctly shows that the sum of the series is $(2n)^2$ and makes an appropriate conclusion.