Question number	Scheme	Marks
1	**Method 1** $16 = a + (5-1)d$ $(= a + 4d)$ or $301 = a + (100-1)d$ $(= a + 99d)$	M1
	$95d = 285$	M1
	$d = 3$ $a = 4$	A1
	Method 2 $301-16 = 295 \Rightarrow 295 = (100-5)d$	[M1
	$\Rightarrow d = \frac{285}{95} = (3)$	M1
	$d = 3 \quad a = 4$	A1]
	Sum to 50 terms Uses $S_n = \frac{n}{2}(2a + (n-1)d)$	
	$S_{50} = \frac{50}{2}[2\times"4"+"3"(50-1)] = 3875$	M1A1
	ALT Uses $S_n = \frac{n}{2}(a+l)$	[5]
	50th term = "4" + 49 ×"3" (=151) **and** $S_{50} = \frac{50}{2}('4'+'151') = 3875$	[M1A1]
		Total 5 marks

Mark	Additional Guidance
Method 1	
M1	At least, one fully correct equation.
M1	Solves their linear equations simultaneously, allow one arithmetical or processing slip to eliminate a (or possibly d).
A1	Both a and d correct.
Method 2	
M1	Uses the difference of the two terms $(301-16)$ together with the difference in position $(100-5)$ and equates to form the equation $285=95d$ This may be implied by their working.
M1	Solves the equation, allow one arithmetical or processing slip to find a value for d
A1	Both a and d correct.
NOTE: If you see the correct values of a and d that come from a method without errors, award **M1M1A1**	
Summation	
M1	Substitution of their values for a and d into the correct summation formula. **OR** They must use the formula for the 50th term correctly using their values and use the correct formula for first plus last with their values.
A1	For 3875