

Q1. (2017)

4	$98 - 8n$	B1	
	Additional Guidance		

Q2. (2018)

5	All 5 correct	B4	B3 for 4 correct B2 for 3 correct B1 for 1 or 2 correct
	Additional Guidance		
	1 1 2 3 5 8 ...	Arithmetic progression	B4
	1 2 4 8 16 32 ...	Geometric progression	
	1 2 3 4 5 6 ...	Fibonacci sequence	
	1 3 6 10 15 21 ...	Triangular numbers	
	1 4 9 16 25 36 ...	Cube numbers	
	1 8 27 64 125 216 ...	Square numbers	
Two connections from a LH box is choice so is incorrect for that box			
Connections do not have to be straight lines			

Q3. (2022)

Q	Answer	Mark	Comment
3	15	B1	

Q4. (2023)

Q	Answer	Mark	Comments
2	28	B1	
	Additional Guidance		

Q5. (2023)

Q	Answer	Mark	Comments
19	Alternative method 1 n th term = $an^2 + bn + c$		
	(second differences =) 10 or $a = 5$ or $5n^2$	M1	second difference seen at least once and not contradicted by a different value unless recovered may be seen by the sequence
	$3 - 5 \times 1^2$ and $20 - 5 \times 2^2$ or -2 and 0 or $b = 2$ or $2n$	M1dep	oe subtraction of $5n^2$ from any two consecutive terms eg $47 - 5 \times 3^2$ and $84 - 5 \times 4^2$ or 2 and 4 implied by $5n^2 + 2n \dots$
	$5 \times 1^2 + 2 \times 1 + c = 3$ or $5 + 2 + c = 3$ or ($2n + c$ and) $2 \times 1 + c = -2$	M1dep	oe substitution of $a = 5$ and $b = 2$ eg $5 \times 2^2 + 2 \times 2 + c = 20$ or oe use of $2n + c$ and another term eg ($2n + c$ and) $2 \times 2 + c = 0$
	$5n^2 + 2n - 4$	A1	terms in any order SC2 $a = 5$ and $c = -4$ SC1 $c = -4$
	Alternative method 2 n th term = $an^2 + bn + c$		
	(second differences =) 10 or $a = 5$ or $5n^2$	M1	second difference seen at least once and not contradicted by a different value unless recovered may be seen by the sequence
	$3 \times 5 + b = 17$ or $b = 2$ or $2n$	M1dep	oe substitution of $a = 5$ eg $5 \times 5 + b = 27$ implied by $5n^2 + 2n \dots$
	$5 \times 1^2 + 2 \times 1 + c = 3$ or $5 + 2 + c = 3$	M1dep	oe substitution of $a = 5$ and $b = 2$ eg $5 \times 2^2 + 2 \times 2 + c = 20$
	$5n^2 + 2n - 4$	A1	terms in any order SC2 $a = 5$ and $c = -4$ SC1 $c = -4$

Question 19 continues on the next page