

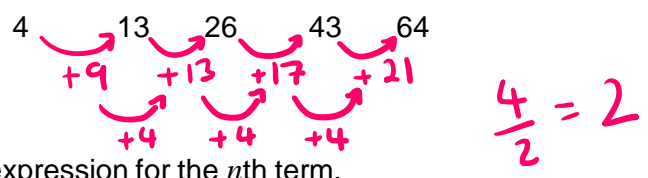


n^{th} term of a Quadratic Sequence



REVISE THIS TOPIC

1 Here are the first four terms of a quadratic sequence.

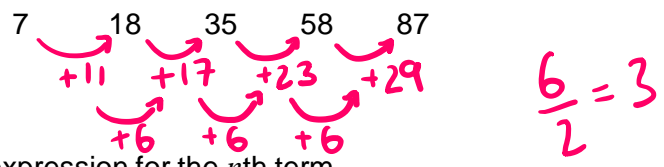


Work out an expression for the n^{th} term. [3 marks]

	4	13	26	43	64
$2n^2$	2	8	18	32	50
$3n-1$	2	5	8	11	14

Answer $2n^2 + 3n - 1$

2 Here are the first four terms of a quadratic sequence.



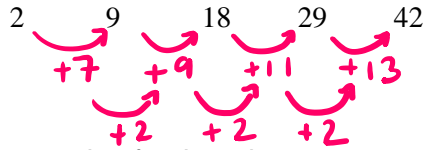
Work out an expression for the n^{th} term. [3 marks]

	7	18	35	58	87
$3n^2$	3	12	27	48	75
$2n+2$	4	6	8	10	12

Answer $3n^2 + 2n + 2$



3 Here are the first four terms of a quadratic sequence.



$$\frac{2}{2} = 1$$

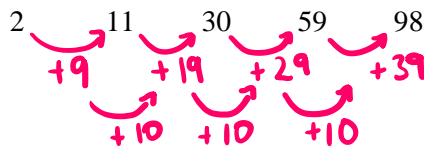
Work out an expression for the n th term.

[3 marks]

	2	9	18	29	42
n^2	1	4	9	16	25
$4n-3$	1	5	9	13	17

Answer $n^2 + 4n - 3$

4 Here are the first four terms of a quadratic sequence.



$$\frac{10}{2} = 5$$

Work out an expression for the n th term.

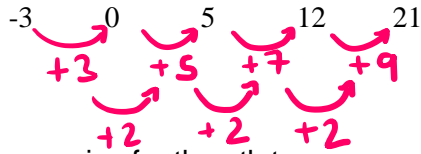
[3 marks]

	2	11	30	59	98
$5n^2$	5	20	45	80	125
$-6n+3$	-3	-9	-15	-21	-27

Answer $5n^2 - 6n + 3$



5 Here are the first four terms of a quadratic sequence.



$$\frac{2}{2} = 1$$

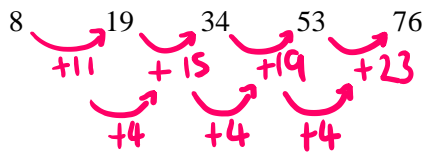
Work out an expression for the n th term.

[3 marks]

	-3	0	5	12	21
n^2	1	4	9	16	25
-4	-4	-4	-4	-4	-4

Answer $n^2 - 4$

6 Here are the first four terms of a quadratic sequence.



$$\frac{4}{2} = 2$$

Work out an expression for the n th term.

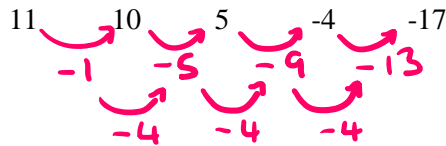
[3 marks]

	8	19	34	53	76
$2n^2$	2	8	18	32	50
$5n+1$	6	11	16	21	26

Answer $2n^2 + 5n + 1$



7 Here are the first four terms of a quadratic sequence.



$$-\frac{4}{2} = -2$$

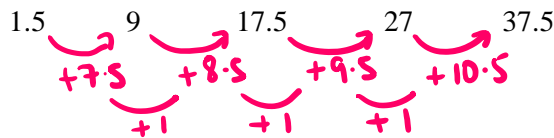
Work out an expression for the n th term.

[3 marks]

	11	10	5	-4	-17
$-2n^2$	-2	-8	-18	-32	-50
$5n+8$	13	18	23	28	33

Answer $-2n^2 + 5n + 8$

8 Here are the first four terms of a quadratic sequence.



$$\frac{1}{2} = 0.5$$

Work out an expression for the n th term.

[3 marks]

	1.5	9	17.5	27	37.5
$0.5n^2$	0.5	2	4.5	8	12.5
$6n-5$	1	7	13	19	25

Answer $0.5n^2 + 6n - 5$

