1. Here are the first five terms of a sequence together with its expression for the nth term

6	12	22	36	54	$2n^2 + 4$

Match these five expression for the nth term of a sequence with the five sequences in the table.

$$n^2 + 2$$
  $4n^2 + 8$   $-2n^2 - 4$   $2n^2 + 6$   $2n^2 + 1$ 

a	3	9	19	33	51	
b	12	24	44	72	108	
c	8	14	24	38	56	
d	3	6	11	18	27	
e	-6	- 12	- 22	- 36	- 54	

2. Here are the first five terms of a sequence.

5

10

17

26

An expression for the *n*th term of this sequence is  $n^2 + 1$ 

Write down in terms of n, an expression for the nth term of a sequence whose first five terms are

7

2

10

15

22

31

. . . . . . . . . . .

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$\begin{vmatrix} 6 & 12 & 22 & 36 & 54 \end{vmatrix} = 2n^2 + 4$		6 12	22	36	54	$2n^2 + 4$	
--	--	------	----	----	----	------------	--

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12

6

-4

-18

-36

An expression for the nth term of this sequence is  $14 - 2n^2$ 

Write down in terms of n, an expression for the nth term of a sequence whose first five terms are

8

2

-8

-22

-40

4. Here are the first five terms of a sequence.

3

0

-9

-24

-45

An expression for the *n*th term of this sequence is  $6n - 3n^2$ 

Write down in terms of n, an expression for the nth term of a sequence whose first five terms are

-3

0

9

24

45

. . . . . . . . . . .

**sequenceOther (8) Answers** 1a)  $2n^2 + 1$  b)  $4n^2 + 8$  c)  $2n^2 + 6$  d)  $n^2 + 2$  e)  $-2n^2 - 4$ 3)  $10 - 2n^2$  4)  $-6n + 3n^2$ 2)  $n^2 + 6$ 

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2)  $n^2 + 6$ 

3)  $10 - 2n^2$  4)  $-6n + 3n^2$