

A167 Quadratic sequences

Q1.

Here are the first four terms of a quadratic sequence.

3 8 15 24

(a) Find an expression, in terms of n , for the n th term of this sequence.

.....

(3)

The n th term of a different sequence is $2^n + 5$

(b) Show that 36 is **not** a term of this sequence.

.....
.....

(1)

(Total for question = 4 marks)

Q2.

Here are the first 5 terms of a quadratic sequence.

1 3 7 13 21

Find an expression, in terms of n , for the n th term of this quadratic sequence.

.....
(Total for question is 3 marks)

Q3.

Here are the first five terms of a sequence.

4 11 22 37 56

Find an expression, in terms of n , for the n th term of this sequence.

.....
(Total for question = 3 marks)

Q4.

Here are the first 7 terms of a quadratic sequence.

3 6 11 18 27 38 51

(a) Find an expression, in terms of n , for the n th term of this sequence.

.....
(2)

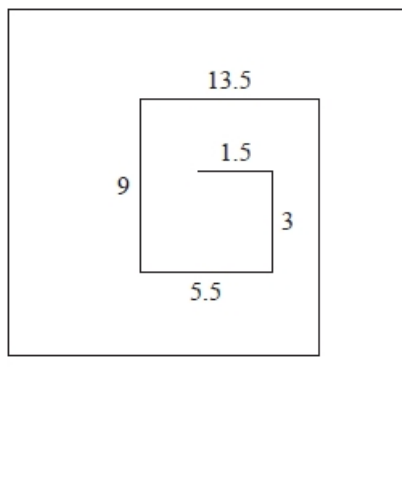
(b) Find the 50th term of this sequence.

.....
(1)

(Total for question = 3 marks)

Q5.

The diagram shows the first 10 sides of a spiral pattern.
It also gives the lengths, in cm, of the first 5 sides.



The lengths, in cm, of the sides of the spiral form a sequence.
Find an expression in terms of n for the length, in cm, of the n th side.

.....
(Total for question = 3 marks)

Q6.

The n th term of a sequence is given by $an^2 + bn$ where a and b are integers.

The 2nd term of the sequence is -2

The 4th term of the sequence is 12

(a) Find the 6th term of the sequence.

.....
(4)

Here are the first five terms of a different quadratic sequence.

0 2 6 12 20

(b) Find an expression, in terms of n , for the n th term of this sequence.

.....
(2)

(Total for question = 6 marks)

Q7.

Here are the first six terms of a quadratic sequence.

-1 5 15 29 47 69

Find an expression, in terms of n , for the n th term of this sequence.

.....
(Total for question = 3 marks)

Q8.

Here are the first five terms of a sequence.

-1 0 3 8 5 1

Find an expression, in terms of n , for the n th term of this sequence.

.....
(Total for question = 2 marks)