The Nth Term of a Quadratic Sequence

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	The Nth Term of a Quadratic Sequence
Grade Level	Grade 8/9
Booklet	Question Paper

Time Allowed: 53 minutes

Score: /44

Percentage: /100

Grade Boundaries:

1. Write down the next two terms in the following quadratic sequence.

$$9, \ 13, \ 19, \ 27...$$

.... (2)

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2. Write down the next two terms in the following quadratic sequence.

$$-5, \ 0, \ 9, \ 22...$$

.... (2)

3. The nth term of a sequence is

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

Work out the 10th term of the sequence

.... (2)

4. The nth term of a sequence is

$$n^2 + 2n$$

Work out the first 5 terms in the sequence

.... (2)

5. Work out the formula for the nth term of the quadratic sequence:

$$5, \ 11, \ 19, \ 29...$$

.... (4)

6. Work out the formula for the nth term of the quadratic sequence:

$$2, \ 10, \ 22, \ 38...$$

.... (4)

7. Work out the formula for the nth term of the quadratic sequence:

$$15, \quad 19, \quad 25, \quad 33\ldots$$

.... (4)

8. Work out the formula for the nth term of the quadratic sequence:

$$2, \quad 10, \quad 24, \quad 44\ldots$$

.... (4)

9. Work out the formula for the nth term of the quadratic sequence:

$$19, \ 15, \ 9, \ 1...$$

.... (4)

10. Work out the formula for the nth term of the quadratic sequence:

$$-2, \ -1, \ 1, \ 4...$$

.... (4)

11. A quadratic sequence starts:

$$6, \ 10, \ 16, \ 24...$$

a) Show that the nth term is $n^2 + n + 4$

.... (4)

b) Hence find the term that has value 136

.... (2)

12. A quadratic sequence starts:

$$-8, \ 2, \ 16, \ 34...$$

a) Show that the nth term is $2n^2 + 4n - 14$

.... (4)

b) Hence find the term that has value 272

.... (2)