



2.12 – Sequences

Student name: _____ Score: _____

1. The first five terms of a sequence are 0, 3, 8, 15, 24.

(a) Write down the next two terms of the sequence.

....., [1]

(b) Find the n th term of the sequence.

..... [2]

2. The first four terms of a sequence are 1, 3, 9, 27.

(a) Write down the next term of this sequence.

..... [1]

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

..... [2]

3. The first five terms of a sequence are

-2, 1, 6, 13, 22.

(a) Write down the next term in the sequence.

..... [1]

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

..... [1]

4. Find the next two terms in this sequence.

1, 2, 6, 15, 31,

....., [2]

5. These are the first four terms of a sequence.

15 11 7 3

Find

(a) the next term,

..... [1]

(b) the n th term.

..... [2]



6. These are the first five terms of a sequence.

2 6 12 20 30

(a) Find the next term.

..... [1]

(b) Find an expression for the n th term.

..... [3]

7. Find the next term in each of these sequences.

(a) 3, 5, 8, 12, 17, [1]

(b) 100, 91, 80, 67, 52, [1]

(c) 4, 12, 36, 108, 324, [1]

8. Find the next term in each of these sequences.

(a) 81, 77, 72, 66, 59, [1]

(b) 3, -6, 12, -24, 48, [1]

(c) 16, 8, 4, 2, 1, [1]

9. Here are the first four terms of a sequence.

11 8 5 2

Write down the next term of the sequence.

..... [1]

10.

6, 12, 24, 48, 96, ...

(a) Write down the next term in the sequence.

..... [1]

(b) Find the 8th term in the sequence.

..... [1]

(c) Find an expression for the n th term of the sequence.

..... [2]



11. Find the n th term of this sequence.

- 1, 0, 3, 8, 15,

..... [3]

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

3 7 11 15 19

(a) Write down the next term.

..... [1]

(b) Find the n th term of the sequence.

..... [2]

13. The first 4 terms of a sequence are 20, 13, 6 and - 1.

Find

(a) the next term,

..... [1]

(b) the n th term.

..... [2]

14. Here are the first four terms of a sequence.

11 8 5 2

Write down the next term of the sequence.

..... [1]

15. These are the first five terms of a sequence.

1 0 1 4 9

Find the n th term of this sequence.

..... [2]

16. Here are the first four terms of a sequence.

13 9 5 1

(a) Write down the next term.

..... [1]

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

..... [2]

17. 9, 27, 81, 243, ...

Find the n th term of this sequence.

..... [2]



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

$$\frac{1}{4} \quad 1 \quad 4 \quad 16 \quad 64$$

(a) Find the next term.

..... [1]

(b) Find the n th term.

..... [2]

19. Find the next term and an expression for the n th term of the following sequence.

$$-9, \quad -3, \quad 7, \quad 21, \quad 39, \quad \dots$$

next term =

n th term = [3]

20. These are the first four terms in a sequence.

$$27 \quad 19 \quad 11 \quad 3$$

(a) Write down the next term.

..... [1]

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

..... [2]

21. Find an expression for the n th term of each sequence.

(a) 1, 7, 13, 19, 25, ...

..... [2]

(b) 1, -2, 3, -4, 5, ...

..... [2]

