

nth term of Linear Sequences



REVISE THIS **TOPIC**

The first four terms of an arithmetic sequence are

3

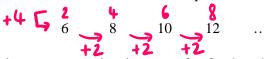
12

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 1 is 2 marks)

The first four terms of an arithmetic sequence are



Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 2 is 2 marks)

The first four terms of an arithmetic sequence are

$$-1$$
 $\begin{bmatrix} 3 \\ 2 \\ +3 \end{bmatrix}$ $\begin{bmatrix} 6 \\ 9 \\ 5 \\ 5 \end{bmatrix}$ $\begin{bmatrix} 12 \\ 11 \end{bmatrix}$...

Write down an expression, in terms of *n*, for the *n*th term of the sequence.



(Total for Question 3 is 2 marks)

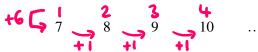


Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 4 is 2 marks)

5 The first four terms of an arithmetic sequence are



Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 5 is 2 marks)

6 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



5n-3

(Total for Question 6 is 2 marks)



$$+44$$
 $= 6$ $= 62$ $= 68$ $= 68$ $= 68$ $= 68$ $= 68$ $= 68$ $= 68$ $= 68$ $= 68$

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 7 is 2 marks)

8 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 8 is 2 marks)

9 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



0.5n + 3.5

(Total for Question 9 is 2 marks)



Write down an expression, in terms of *n*, for the *n*th term of the sequence.



(Total for Question 10 is 2 marks)

11 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 11 is 2 marks)

12 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



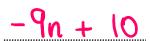
-5n + 14

(Total for Question 12 is 2 marks)



+10
$$\begin{bmatrix} -9 & -18 & -27 & -36 \\ 1 & -9 & -9 & -9 & -7 \end{bmatrix}$$
 ...

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 13 is 2 marks)

14 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



(Total for Question 14 is 2 marks)

15 The first four terms of an arithmetic sequence are

Write down an expression, in terms of n, for the nth term of the sequence.



-0.2n + 6.2

(Total for Question 15 is 2 marks)



Work out the 20th term of the sequence.

$$5n + 1$$

 $5 \times 20 + 1$
= $100 + 1$

(Total for Question 16 is 3 marks)

17 The first five terms of an arithmetic sequence are

(Total for Question 17 is 3 marks)

18 The first five terms of an arithmetic sequence are

Work out the 100th term of the sequence.

(Total for Question 18 is 3 marks)





4 7 10 13 16

Is the number 91 in the sequence? You must show how you get your answer.

$$3n + 1 = 91$$

 $3n = 90$
 $n = 30$

(Total for Question 19 is 3 marks)

20 The first five terms of an arithmetic sequence are

3 7 11 15 19 ...

Is the number 201 in the sequence? You must show how you get your answer.

$$4n - 1 = 201$$
 $4n = 202$
 $n = 50.5$
 50.5 is not an integer

It is not in the sequence



(Total for Question 20 is 3 marks)



7 13 19 25 31 ...

Is the number 124 in the sequence? You must show how you get your answer.

$$6n + 1 = 124$$

 $6n = 123$
 $n = 20.5$

50.5 is not an integer It is not in the sequence

(Total for Question 21 is 3 marks)

22 The first five terms of an arithmetic sequence are

50 47 44 41 38 ...

Is the number –10 in the sequence? You must show how you get your answer.

$$-3n + 53 = -10$$

 $-3n = -63$
 $n = 9$

Yes, it is the 9th term



(Total for Question 22 is 3 marks)