



4.7F Sequences (Nth Term): Foundation Tier Practice

EDEXCEL 1MA1 · Calculator allowed · about 40 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** A sequence begins 2, 5, ... and each term increases by the same amount. Work out the 3rd term of the sequence.

(Total for Question 1 is 1 mark)

- 2** Write down the missing number in this sequence: 7, 10, 13, __, 19.

(Total for Question 2 is 1 mark)

- 3** Work out the 6th term of the sequence defined by n th term = $4n - 1$.

(Total for Question 3 is 1 mark)

- 4** Find the n th term of the sequence 3, 6, 9, 12, ...

(Total for Question 4 is 2 marks)

- 5** Write down an expression for the n th term of the sequence 10, 8, 6, 4, ...

(Total for Question 5 is 2 marks)

6 The sequence is 5, 9, 13, 17, ... Find the value of n for the term 29.

(Total for Question 6 is 2 marks)

7 a) Write down the n th term of the sequence -2, 1, 4, 7, ...

b) Work out the 10th term.

(a) Write down the n th term of the sequence -2, 1, 4, 7, ... (2)

(b) Work out the 10th term.

(1)

(Total for Question 7 is 3 marks)

8 The n th term of a sequence is $7n - 2$. Is 48 a term of this sequence? Give a reason for your answer.

(Total for Question 8 is 2 marks)

9 a) Find the n th term of the sequence 2, 7, 12, 17, ...

b) Work out the 6th term.

(a) Find the n th term of the sequence 2, 7, 12, 17, ... (2)

(b) Work out the 6th term.

(1)

(Total for Question 9 is 3 marks)

10 Show that every term of the sequence with n th term $6n - 4$ is an even number.

(Total for Question 10 is 2 marks)

Mark scheme · 4.7F Sequences (Nth Term): Foundation Tier Practice

Question 1

- **B1** 8 cao
- **Answer: 8**

Question 2

- **B1** 16 cao
- **Answer: 16**

Question 3

- **B1** 23 cao
- **Answer: 23**

Question 4

- **M1** identify multiply by 3 pattern or show $3, 6, 9, 12 = 3n$ oe
- **A1** $3n$ cao
- **Answer: $3n$**

Question 5

- **M1** identify subtract 2 each time or form $12 - 2n$ oe
- **A1** $12 - 2n$ cao
- **Answer: $12 - 2n$**

Question 6

- **M1** use nth term formula $4n + 1 = 29$ or show $5 + (n-1)4 = 29$ oe
- **A1** 7 cao
- **Answer: 7**

Question 7

- (a) **M1** identify add 3 pattern or form $3n - 5$ oe
- (a) **A1** $3n - 5$ cao
- (a) **Answer: $3n - 5$**
- (b) **B1** 25 cao
- (b) **Answer: 25**

Question 8

- **M1** attempt to solve $7n - 2 = 48$ leading to $n = 50/7$ or show division step
- **A1** correct conclusion that 48 is not a term because n is not an integer oe
- **Answer: No, 48 is not a term because $7n - 2 = 48$ gives $n = 50/7$ which is not a whole number.**

Question 9

- (a) **M1** identify add 5 pattern or form $5n - 3$ oe
- (a) **A1** $5n - 3$ cao
- (a) **Answer: $5n - 3$**
- (b) **B1** 27 cao
- (b) **Answer: 27**

Question 10

- **M1** show algebraic factorisation $6n - 4 = 2(3n - 2)$ or equivalent
- **A1** conclude every term is even because it is 2 times an integer cso
- **Answer: $6n - 4 = 2(3n - 2)$, so every term is even because it is 2 times an integer.**