



ACHIEVE ACADEMY

GCSE Maths — Higher Tier

Sequences · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Sequences

Total marks available: 118

Sequences

Q1

[3 marks]

The n th term of a sequence is $-4n - 11$. Find the 27th term.

Q2

[3 marks]

Find the n th term of the sequence 11, 20, 29, 38, ...

Q3

[3 marks]

The n th term of a sequence is $-9n + 18$. Find the 28th term.

Q4

[3 marks]

Find the n th term of the sequence 20, 29, 38, 47, ...

Q5

[3 marks]

The n th term of a sequence is $-5n - 11$. Find the 19th term.

Q6

[3 marks]

Find the n th term of the sequence $-11, -3, 5, 13, \dots$

Q7

[3 marks]

Find the n th term of the sequence 4, 6, 8, 10, ...

Q8

[3 marks]

The n th term of a sequence is $3n - 14$. Find the 29th term.

Q9

[3 marks]

Find the n th term of the sequence 24, 29, 34, 39, ...

Q10

[3 marks]

Find the n th term of the sequence 1, 10, 19, 28, ...

Q11

[5 marks]

Find the n th term of the quadratic sequence $-9, -9, -7, -3, \dots$

Q12

[5 marks]

Find the n th term of the quadratic sequence $-4, -9, -18, -31, \dots$

Q13

[3 marks]

The n th term of a sequence is $-n^2 + 2n + 6$. Find the 19th term.

Q14

[5 marks]

Find the n th term of the quadratic sequence 10, 21, 36, 55, ...

Q15

[3 marks]

The n th term of a sequence is $3n^2 - 3n + 8$. Find the 25th term.

Q16

[5 marks]

Find the n th term of the quadratic sequence $-10, -14, -20, -28, \dots$

Q17

[5 marks]

Find the n th term of the quadratic sequence $0, -1, -6, -15, \dots$

Q18

[5 marks]

Find the n th term of the quadratic sequence $-6, -18, -34, -54, \dots$

Q19

[3 marks]

The n th term of a sequence is $-2n^2 - 5n + 1$. Find the 23rd term.

Q20

[3 marks]

The n th term of a sequence is $-2n^2 - 6n$. Find the 18th term.

Q21

[5 marks]

The n th term of a sequence is $n^2 - 3n$. Is 10 a term in this sequence? Give a reason.

Q22

[5 marks]

The n th term of a sequence is $3n^2 + 6n + 9$. Is 81 a term in this sequence? Give a reason.

Q23

[4 marks]

Here are the first four terms of a sequence: 1, -3, 9, -27, ... Find the 6th term.

Q24

[5 marks]

The n th term of a sequence is $2n^2 + 3n + 6$. Is 72 a term in this sequence? Give a reason.

Q25

[4 marks]

Here are the first four terms of a sequence: 5, -10 , 20, -40 , ... Find the 5th term.

Q26

[4 marks]

Here are the first four terms of a sequence: 3, 6, 12, 24, ... Find the 5th term.

Q27

[5 marks]

The n th term of a sequence is $2n^2 + n + 9$. Is 88 a term in this sequence? Give a reason.

Q28

[4 marks]

Here are the first four terms of a sequence: 3, 9, 27, 81, ... Find the 5th term.

Q29

[5 marks]

The n th term of a sequence is $3n^2 + n + 1$. Is 156 a term in this sequence? Give a reason.

Q30

[5 marks]

The n th term of a sequence is $3n^2 - 3n - 9$. Is 160 a term in this sequence? Give a reason.