

Sequences (H & F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

Name:	ANSWERS BY
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1. Find the nth term of the sequence 6, 13, 20, 27, ...

7n-1

[2]

2. The nth term of a sequence is 2n + 1

The nth term of a different sequence is 3n - 1

Work out the **three** numbers that are

in both sequences

and

23,29,35

between 20 and 40

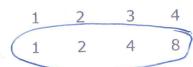
2n+1: 21,23,25,27,29,31,33,35,37,39

3n-1:20,23,26,29,32,35,38

[3]

3. Which sequence is a geometric progression?

Circle your answer.



1 2 4 7

1 2 3 5

[1]

4. Here are the first four terms of an arithmetic sequence.

6 10 14 18

(a) Write an expression, in terms of n, for the nth term of this sequence.

4n+2 [2]

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The nth term of a different arithmetic sequence is 3n + 5

(b) Is 108 a term of this sequence? 3n+5=108

$$3n+5=108$$

Show how you get your answer. (-5) 3n = 103

$$(+3)$$
 n = 341/3

as n is not an integer, 108 is not in

[2]

21

the sequence

5. Here are the first six terms of a Fibonacci sequence.

1

2

3

5

13 8

The rule to continue a Fibonacci sequence is,

the next term in the sequence is the sum of the two previous terms.

(a) Find the 9th term of this sequence.

13 +21

34

The first three terms of a different Fibonacci sequence are

a+b a+2b 2a+3b

(b) Show that the 6th term of this sequence is 3a + 5b

[2]

Given that the 3rd term is 7 and the 6th term is 29,

(c) find the value of a and the value of b.

a+b=7 (1)

 $0 \times 3 \quad 3a + 3b = 21$ 2b = 8

[3]

6. Work out the next term of this quadratic sequence.

[2]

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