Types of Sequences

SCAN ME

REVISE THIS TOPIC

1 Here are the first two terms of a sequence

2 6 …

(a) Michael assumes the sequence is an arithmetic sequence.
Using Michael's assumption, work out the next two terms.

2 → 6 → 10 → 14
+4 +4 +4

10, 14

(2)

(b) Jess assumes the sequence is a geometric sequence.
Using Jess's assumption, work out the next two terms.

2 → 6 → 18 → 54
×3 ×3 ×3

18, 54

(2)

(c) Gabby assumes the sequence is a Fibonacci sequence.
Using Gabby's assumption, work out the next two terms.

2 6 8 14

8, 14

(2)

(Total for Question 1 is 6 marks)

2 Here are the first two terms of a geometric sequence

20 10 …

Work out the 4th term of the sequence.

20 ÷2 10 ÷2 5 ÷2 2·5

2·5

(Total for Question 2 is 2 marks)

3 Here are the first two terms of a Fibonacci sequence

2 5 …

Work out the 4th term of the sequence.

2 5 7 12

12

(Total for Question 3 is 2 marks)

4 Here are the first two terms of an arithmetic sequence

2 4 …

Work out the 4th term of the sequence.

2 +2 4 +2 6 +2 8

8

(Total for Question 4 is 2 marks)

5 Here are the first two terms of a Fibonacci sequence

1 3 …

Work out the 4th term of the sequence.

1 3 4 7

7

(Total for Question 5 is 2 marks)

6 Here are the first two terms of an arithmetic sequence

3 9 …

Work out the 4th term of the sequence.

3 (+6) 9 (+6) 15 (+6) 21

21

(Total for Question 6 is 2 marks)

7 Here are the first two terms of a geometric sequence

8 16 …

Work out the 4th term of the sequence.

8 (×2) 16 (×2) 32 (×2) 64

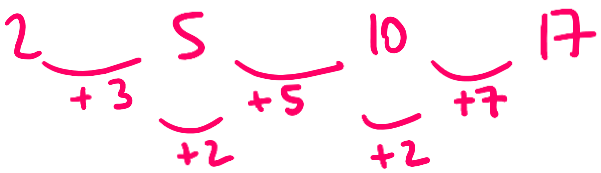
64

(Total for Question 7 is 2 marks)

8 Here are the first three terms of a quadratic sequence

2 5 10 …

Work out the 4th term of the sequence.



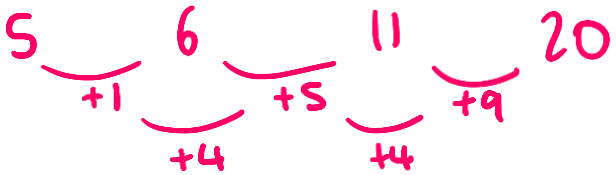
17

(Total for Question 8 is 2 marks)

9 Here are the first three terms of a quadratic sequence

5 6 11 …

Work out the 4th term of the sequence.



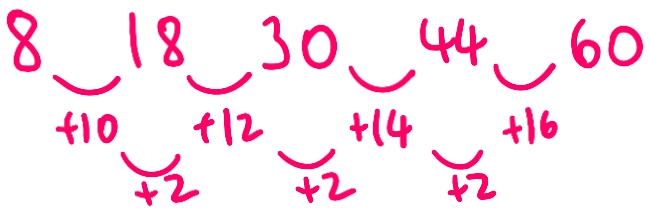
20

(Total for Question 9 is 2 marks)

10 Here are the first three terms of a quadratic sequence

8 18 30 …

Work out the 5th term of the sequence.



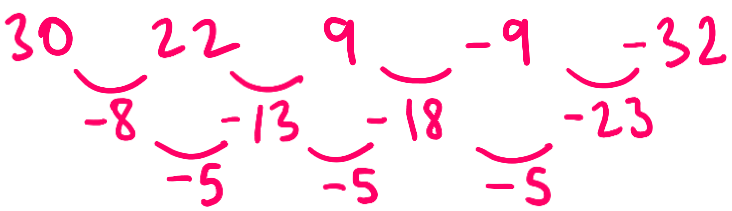
60

(Total for Question 10 is 3 marks)

11 Here are the first three terms of a quadratic sequence

30 22 9 …

Work out the 5th term of the sequence.



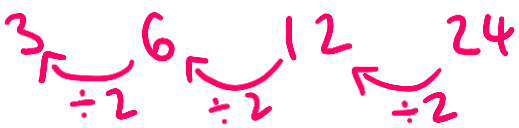
-32

(Total for Question 11 is 3 marks)

12 The third and fourth terms of a geometric sequence are shown below.

… … 12 24

Work out the 1st term of the sequence.



3

(Total for Question 12 is 2 marks)

13 The third and fourth terms of an arithmetic sequence are shown below.

… … 5 15

Work out the 1st term of the sequence.

-15

(Total for Question 13 is 2 marks)

14 The third and fourth terms of a Fibonacci sequence are shown below.

… … 10 16

Work out the 1st term of the sequence.

16 − 10 = 6
10 − 6 = 4

4

(Total for Question 14 is 2 marks)

15 Here are some sequences.

Sequence **A**	Sequence **B**	Sequence **C**
2 4 6 8 10	2 4 8 16 32	2 4 6 10 12

Sequence **D**	Sequence **E**	Sequence **F**
2 4 6 12 24	2 4 8 14 22	2 4 6 10 16

Match each type of sequence in the table to the correct sequence above.

Type of Sequence	**Sequence Letter**
Arithmetic Sequence	A
Quadratic Sequence	E
Geometric Sequence	B
Fibonacci Sequence	F

(Total for Question 15 is 4 marks)