

Name: \_\_\_\_\_

Exam Style Questions

# Sequences



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

## Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

Video 286

Video 287



1. Here are the first four terms of a number sequence.

8    14    20    26

(a) Write down the next term of the number sequence.

32

.....  
(1)

(b) Explain how you found your answer.

The sequence is increasing by 6, so I added 6  
to 26.

.....  
(1)

---

2. Here are the first four terms of a number sequence.

2    5    8    11

(a) (i) Write down the next term of the number sequence.

14

.....  
(1)

(ii) Explain how you found your answer.

The sequence is increasing by 3, so I added 3  
to 11.

.....  
(1)

The 40th term of the number sequence is 119.

(b) Work out the 41st term of the number sequence.

122

.....  
(1)

3. Here are the first four terms of a number sequence.

11 15 19 23

(a) (i) Write down the next term of the number sequence.

27

.....  
(1)

(ii) Explain how you found your answer.

The sequence is increasing by 4, so I added 4  
to 23.

.....  
(1)

The 100th term of the number sequence is 407.

(b) Work out the 99th term of the number sequence.

403

.....  
(1)

---

4. Here are the first four terms of a number sequence.

7 10 13 16 19 22 25 28 31 34  
37 40 43 46 49

Work out the difference between the 10th term and 15th term in the sequence.

$$49 - 34 = 15$$

15

.....  
(2)

5. (a) Write down the next term in this sequence.

5    9    13    17    .....

21

.....  
(1)

- (b) Describe the rule for continuing the sequence.

To get the next term, add 4 to the previous  
term

.....  
(1)

---

6. (a) Write down the next term in this sequence.

2    6    18    54    .....

162

.....  
(1)

- (b) Describe the rule for continuing the sequence.

To get the next term, multiply the previous  
term by 3.

.....  
(1)

---

7. (a) Write down the next term in this sequence.

256    128    64    32    .....

16

.....  
(1)

- (b) Describe the rule for continuing the sequence.

To get the next term, divide the previous  
term by 2

.....  
(1)

8. Write down the next two numbers in this sequence.

7    8    10    13    .....    .....  
17    22

.....17..... and .....22.....  
(1)

---

9. Write down the next two numbers in this sequence.

2    5    11    23    .....    .....

.....47..... and .....95.....  
(1)

---

10. Here are the first five terms of a number sequence.

9    15    21    27    33

(a) (i) Write down the next term of the number sequence.

.....39.....  
(1)

(ii) Explain how you found your answer.

The sequence is increasing by 6, so I added 6  
to 33.  
(1)

302 is **not** a term in this number sequence.

(b) Explain why.

302 is an even number, all the numbers  
in the sequence are odd  
(1)

11. Here are the first four terms of a number sequence.

8    12    16    20

(a) (i) Write down the next term in the sequence.

24

.....  
(1)

(ii) Explain how you found your answer.

The sequence is increasing by 4, so I added 4  
to 20.

.....  
(1)

(b) Write down the 9th term in the sequence.

8 12 16 20 24 28 32 36 40

40

.....  
(1)

Ricky says 1001 is in the sequence.

(c) Explain why Ricky is wrong.

1001 is an odd number, all the numbers  
in the sequence are even

.....  
(1)

---

12. Here are the first 4 terms in a number sequence.

132    124    116    108

(a) Write down the next two terms in this number sequence.

100

and

92

.....  
(1)

11 cannot be a term in this number sequence.

(b) Explain why.

11 is an odd number, all the numbers in  
the sequence are even

.....  
(1)



15. (a) The first term of a sequence is  $-5$   
The rule for continuing the sequence.

Multiply by 4  
then  
Subtract 3

What is the second term of the sequence?

$$-5 \times 4 = -20$$

$$-20 - 3 = -23$$

$$\begin{array}{r} -23 \\ \hline (1) \end{array}$$

- (b) Here is a rule for continuing a different sequence.

Add 4  
then  
Multiply by 2

The second term of this sequence is 20.  
What is the first term?

$$20 \div 2 = 10$$

$$10 - 4 = 6$$

$$\begin{array}{r} 6 \\ \hline (2) \end{array}$$



16. Here is a sequence

1    3    17    115

To find the next term the rule is

multiply by  $a$  and then subtract  $b$ , where  $a$  and  $b$  are integers.

Find the values of  $a$  and  $b$ .

$$a = \overset{7}{\dots\dots\dots}$$

$$b = \overset{4}{\dots\dots\dots} \quad (2)$$

---

17. Write down the next term in the sequence.

$2a + b$      $3a + 5b$      $4a + 9b$

$$\overset{5a + 13b}{\dots\dots\dots} \quad (2)$$