



# Term to Term Rule



REVISE THIS TOPIC

CHECK YOUR ANSWERS



1 The first term of a sequence is 1



1      ....      ....      ....

The rule for continuing the sequence is

multiply the previous term by 2 then add 3

(a) Work out the second term of the sequence.

.....  
(1)

(b) Work out the third term of the sequence.

.....  
(1)

(c) Work out the fourth term of the sequence.

.....  
(1)

(Total for Question 1 is 3 marks)





2 The first term of a sequence is 24

24 ....

The rule for continuing the sequence is

subtract 4 from the previous term and then divide by 2

(a) Work out the third term of the sequence.

.....  
(2)

The second term of a different sequence is 46

.... 46 ....

The rule for continuing the sequence is

multiply the previous term by 5 then add 1

(b) Work out the first term of the sequence.

.....  
(2)

(Total for Question 2 is 4 marks)





3 The first term of a sequence is 3

3     ....     ....     ....

The rule for continuing the sequence is

add 4 to the previous term and then multiply by 3

(a) Work out the third term of the sequence.

.....  
(2)

The second term of a different sequence is 9

....     9     ....     ....

The rule for continuing the sequence is

subtract 1 from the previous term and then divide by 2

(b) Work out the first term of the sequence.

.....  
(2)

(Total for Question 3 is 4 marks)





4 The first term of a sequence is 30

30 .... .... ....

The rule for continuing the sequence is

divide the previous term by 2 and then add 10

(a) Work out the third term of the sequence.

.....  
(2)

The third term of a different sequence is 750

.... .... 750 ....

The rule for continuing the sequence is

add 5 to the previous term then multiply by 10

(b) Work out the first term of the sequence.

.....  
(3)

(Total for Question 4 is 5 marks)





5 The second term of a sequence is 11

.... 11 .... ....

The rule for continuing the sequence is

multiply the previous term by 5 then subtract 4

(a) Work out the first term of the sequence.

.....  
(2)

(a) Work out the third term of the sequence.

.....  
(1)

(b) Work out the fourth term of the sequence.

.....  
(1)

(Total for Question 5 is 4 marks)



6 The first and third terms of a sequence are shown below.



11 .... 37 ....

The rule for continuing the sequence is

add  $k$  to the previous term

Work out the value of  $k$ .

$k = \dots\dots\dots$

(Total for Question 6 is 2 marks)

7 The first and fourth terms of a sequence are shown below.



16 .... .... -5

The rule for continuing the sequence is

subtract  $m$  from the previous term

Work out the value of  $m$ .

$m = \dots\dots\dots$

(Total for Question 7 is 3 marks)



8 The first term of a sequence is 6



6     ....     ....     ....

The rule for continuing the sequence is

multiply the previous term by 2 then subtract 7

Work out the value of the first negative term of the sequence.

.....  
**(Total for Question 8 is 3 marks)**

9 The first term of a sequence is 14



14     ....     ....     ....

The rule for continuing the sequence is

add 2 to the previous term then divide by 2

Work out the value of the first term of the sequence that is not an integer.

.....  
**(Total for Question 9 is 3 marks)**



10 The first term of a sequence is  $-9$



$-9$  ....

The rule for continuing the sequence is

multiply the previous term by 3 then add 20

Work out the value of the first positive term of the sequence.

.....  
(Total for Question 10 is 3 marks)

11 The third term of a sequence is 4



.... 4 ....

The rule for continuing the sequence is

add 4 to the previous term then multiply by 2

Work out the first term of the sequence.

.....  
(Total for Question 11 is 3 marks)







12 The first term of sequence **A** and sequence **B** is 6

Sequence <b>A</b>	6	...	...
Sequence <b>B</b>	6	...	...

The rules for continuing the sequences are

Sequence **A**    add 3 to the previous term then multiply by 2

Sequence **B**    multiply the previous term by 3 then subtract 3

Show that the third terms in both sequences are equal.

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(Total for Question 12 is 4 marks)

