



## 1. [April 2018 qp1 #18]

The term-to-term rule of a sequence is multiply by 3

The fourth term of the sequence is 54

Work out the first term of the sequence

.....

## 2. [April 2018 qp2 #11]

Find the  $n$ th term of each sequence

The first one has been done for you

Sequence	$n$ th term
3, 6, 9, 12, ...	$3n$
6, 12, 18, 24, ...	.....
5, 8, 11, 14, ...	.....

## 3. [October 2018 qp2 #19]

(a) A sequence begins

14    17    20    23

Write down a formula for the  $n$ th term of this sequence.

.....

(b) The  $n$ th term of a different sequence is given by the formula

$$\frac{n}{2n + 1}$$

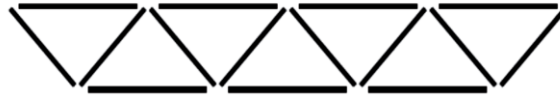
Write down the first **three** terms of the sequence.

..... , ..... , .....



## 4. [April 2017 qp1 #7]

The diagram shows a row of 7 triangles made from matches.



The number of matches needed to make a row of  $t$  triangles is given by the expression  $2t + 1$

Work out the number of matches needed for a row of 36 triangles.

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## 5. [April 2017 qp2 #17]

The  $n$ th term of a sequence is  $2n^2 + 3$

Work out the first three terms of this sequence.

....., ....., .....

## 6. [October 2017 qp1 #23]

The  $n$ th term of a sequence is  $\frac{n(n+1)}{2}$

Show that the sum of the fifth term and the sixth term is a square number.



7. [October 2017 qp2 #9]

Here are the first five terms of a number sequence

23    20    17    14    11

(a) Write down the 8<sup>th</sup> term of this sequence

.....

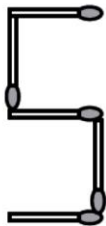
(b) Work out the  $n$ th term of this sequence

.....

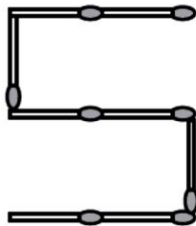
8. [April 2016 qp1 #5]

Natasha is making a pattern using matchsticks.

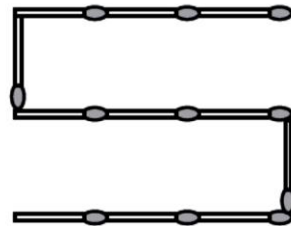
The first three patterns are shown.



Pattern 1



Pattern 2



Pattern 3

Complete the table

Pattern number	1	2	3	4	8
Number of matchsticks	5	8	11		



## 9. [April 2016 qp2 #17]

The first five terms of a sequence are

7, 10, 13, 16, 19, .....

(a) What is the  $n$ th term of the sequence?

.....

(b) Work out the 1000th term of the sequence.

.....

## 10. [October 2016 qp2 #25]

Find the first 4 terms of these sequences.

(a) The position-to-term rule is multiply by 2 then add 3

....., ....., ....., .....

(b) The **third** term is 17, the term-to-term rule is add 5

....., ....., ....., .....