Finding the Nth term

Here is Fernando's example;

Term Number (n)	1	2	3	4
Sequence	2	5	8	11

The **difference** between each number is **3** so the rule (n^{th} term) will start with **3n**.

3n as a sequence is   3 , 6 , 9 , 12

We have   2 , 5 , 8 , 11

So to get the numbers we need, we have to **subtract 1**. This must mean the full rule is:

$$3n - 1$$

Simplissimo Sequences

For each of the following sequences;

    a)   work out the next 3 terms,

    b)   work out the nth term,

    c)   use the nth term rule to work out the 20th term.

1)   3, 5, 7, 9, 11, 13, 15, 2n + 1, 41

2)   9, 12, 15, 18, 21, 24, 27, 3n + 6,   66

3) 7, 11, 15, 19, 23, 27, 31, 4n + 3, 83

4)   10, 16, 22, 28, 34, 40, 46, 6n + 4, 124

5)   1, 5, 9, 13, 17, 21, 25, 4n – 3, 77

6)   4, 11, 18, 25, 32, 39, 46, 7n – 3, 137

7) 2, 7, 12, 17, 22, 27, 32, 5n – 3, 97

8)   4, 9, 14, 19, 24, 29, 34, 5n – 1, 99

9)   7, 5, 3, 1, -1, -3, -5, -2n + 9, -31

10) 16, 13, 10, 7, 4, 1, -2, -3n + 19, -41

Write down the first **five terms** of the sequence with the following n^{th} terms:

11) 3n + 6   9, 12, 15, 18, 21

12) 2n – 3   -1, 1, 3, 5, 7

13) −2n + 1   -1, -3, -5, -7, -9

14) −5n + 12   7, 2, -3, -8, -13