Basic (n formula)

This note will teach you what a (n formula) is and how to find out the formula from different patterns.

A pattern is not a random set a numbers, but rather, it has a fixed formula behind it known as a (n formula).

The (n) in (n formula) stands for the term that the number is in. (Do not worry if you do not understand, this will be shown in an example.

Example 1:

Pattern:	1	3	5	7	9	11	13	15	17
N:	1	2	3	4	5	6	7	8	9

As you can tell, the pattern is that the number increases by 2 each time. (The numbers in the brackets are the numbers in the pattern)

2n: 2 4 6 8 10 12 14 16 18 If you compare the patterns, you will realize that 2n is always 1 less than the original

pattern. Thus, the formula is (2n-1).

Example 1 is an example of easiest type of pattern. This pattern has a constant difference. The difference is then multiplied to (n) to create another pattern. The two patterns are then compared in order to find minor tweaks. (For example, adding or subtracting.) The new formula is the answer, which in this case is (2n-1). (-1 is the minor tweak)

Pattern:	-1	0	1	2	3	4	5	6	7
N:	1	2	3	4	5	6	7	8	9

Example 2 of Constant Difference (CD)

There is a negative in the pattern, but the method to solve it still remains the same.