

# Arithmetic Sequences

Arithmetic Sequences follow a pattern of **adding a fixed amount** from one term to the next

The number being added is called the **common difference**.

To find the common difference, **subtract** the 1<sup>st</sup> term from the 2<sup>nd</sup> term.

	1	4	7	10	13
Term	#				
1 <sup>st</sup>	1	3	4-1		
2 <sup>nd</sup>	4	3	7-4		
3 <sup>rd</sup>	7	3	10-7		
4 <sup>th</sup>	10				
5 <sup>th</sup>	13				

Find  $d$ , the common difference and the next term:

① 6 4 2 0 -2  $d =$  ,

②  $1\frac{1}{2}$  1  $\frac{1}{2}$  0  $-\frac{1}{2}$   $d =$  ,

③ 12.5 14 15.5  $d =$  ,

④ 1, 4, 7, 10, 13

$$a_1 = 1$$

$$a_2 = 4$$

$$a_3 = 7$$

$$a_4 = 10$$

$$a_6 = 16$$

$$a_n = ??$$

function

$$f(1) = 1$$

$$f(2) = 4$$

$$f(3) = 7$$

$$f(4) = 10$$

$$f(n) = ??$$