## **SEQUENCES**

## A NUMERICAL SEQUENCE

Definition Numerical Sequence

A numerical sequence is a list of numbers that follow a specific rule.

- The first number is called the 1<sup>st</sup> term.
- The second number is called the 2<sup>nd</sup> term.
- The third number is called the 3<sup>rd</sup> term.
- And so on.

**Ex:** What is the  $6^{th}$  term of this sequence?

n	1	2	3	4	5	6
$n^{\mathbf{th}}$ term	3	5	7	9	11	13

Answer: The  $6^{th}$  term is 13.

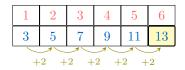
Definition Arithmetic Sequence —

An arithmetic sequence is a list of numbers in which the same value is added or subtracted each time to get the next term.

**Ex:** What is the 6<sup>th</sup> term of this sequence?

n	1	2	3	4	5	6
$n^{\mathbf{th}}$ term	3	5	7	9	11	?

Answer: The 6<sup>th</sup> term is 13, because each term increases by 2.



Definition Geometric Sequence \_\_\_\_

A geometric sequence is a list of numbers in which the same value is multiplied or divided each time to get the next term.

Ex: What is the  $5^{th}$  term of this sequence?

n	1	2	3	4	5
$n^{\mathbf{th}}$ term	2	4	8	16	?

Answer: The 5<sup>th</sup> term is 32, because each term is multiplied by 2.

