

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 1st term.
- The second number is called the 2nd term.
- The third number is called the 3rd term.
- And so on.

Ex: What is the 6th term of this sequence?

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

Answer: The 6th 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 6th term of this sequence?

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

Answer: The 6th term is 13, because each term increases by 2.

1	2	3	4	5	6
3	5	7	9	11	13

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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 5th term of this sequence?

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

Answer: The 5th term is 32, because each term is multiplied by 2.

1	2	3	4	5
2	4	8	16	32

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