1 Hello!

2 Sequences

Sequences are a collection of objects in some particular order.

2.0.1 Notation

A sequence is written in the form $t_1, t_2, \ldots, t_n$ where t_1, t_2, and t_n represent the first, second and nth terms of the sequence respectively.

Example

Let us consider the sequence of odd numbers $1, 3, 5, \ldots$. We can then identify the terms as follows:

t_1	t_2	t_3	t_4	$\ldots$	t_n
1	3	5	7	$\ldots$	$2n - 1$

2.1 Arithmetic Sequences

Arithmetic sequences are sequences where each term differs by the same amount.

2.1.1 Recursive Formula of an Arithmetic Sequence

2.1.2 General Formula of an Arithmetic Sequence

The general formula of an arithmetic sequence can be represented as

$$t_n = t_1 + (n-1)d$$

where

- n is the term number, and

- d is the common difference.