

## Series

Given the infinite sequence

$$a_1, a_2, a_3, \dots, a_n, \dots,$$

the sum of the terms

$$a_1 + a_2 + a_3 + \dots + a_n + \dots +$$

is called an **infinite series**. A **partial sum** is the sum of the first  $n$  terms:

$$a_1 + a_2 + a_3 + \dots + a_n$$

A partial sum is also called a **finite series**, or  $n^{th}$  **partial sum**, and is denoted  $S_n$