Arithmetic Series

$S_n = \frac{n}{2}(2a + (n-1)d)$

n = first n terms
a = first term
d = common difference

Find first 10 terms of the arithmetic series w/ first term ($S_0 = 3$) and common difference ($d = 4$)

$S_{10} = \frac{10}{2}(2 \times 3 + (10-1) \times 4)$

$S_{10} = 5(6 + 36)$

$= 30 + 180$

$= \underline{210}$

Series 30th Oct 23' (CM Week 4)

Sequence $\{a_n\}$ $n = 0, 1, 2 \ldots$

Series $\{S_n\}$ $n = 0, 1, 2 \ldots$

$S_n = a_0 + a_1 + a_2 \ldots$ eg: $S_1 = a_0 + a_1$, $S_2 = a_0 + a_1 + a_2 \ldots$

↓

A sum of the elements of another sequence.

Can be indicated w/ Σ (sigma) eg $S_n = \sum_{i=0}^{n} a_i$