0.1 Products

A product is a repeated multiplication of a sequence.

$p_n = \prod_{i=0}^{n} s_i$

0.1.1 Multiplication of products

We can take constants out of the product.

$p_n = \prod_{i=0}^{n} ca_i$

$p_n = a^n \sum_{i=0}^{n} a_i$

0.1.2 Products of constants

If $a_i = c$ then the summation is then of the form:

$p_n = \prod_{i=0}^{n} c$

$p_n = c^n \prod_{i=j}^{n} 1$

$p_n = c^n$

0.1.3 Combining products

If a sequence is the product of to other sequences then the product of the sequence is equal to the product of the two individual sequences.

$p_n = \prod_{i=0}^{n} a_i$

$p_n = \prod_{i=0}^{n} b_i c_i$

$p_n = \prod_{i=0}^{n} b_i \prod_{i=0}^{n} c_i$