

Summation notation

$$1 + 2 + 3 + 4 + 5 \dots N$$

$$\sum_{i=0}^N x_i = x_0 + x_1 + x_2 \dots x_N$$

↑
"sigma"
notation

$$\begin{aligned} \sum_{i=0}^3 x_i &= x_0 + x_1 + x_2 + x_3 \\ &= 0 + 1 + 2 + 3 \\ &= 6 \end{aligned}$$

$$\begin{aligned} \sum_{i=1}^{N=4} x_i^2 &= x_1^2 + x_2^2 + x_3^2 + x_4^2 \\ &= 1^2 + 2^2 + 3^2 + 4^2 \\ &= 1 + 4 + 9 + 16 \end{aligned}$$

$$\begin{aligned} \sum_{i=2}^{N=4} (x_i - 1)^3 &= (x_2 - 1)^3 + (x_3 - 1)^3 + (x_4 - 1)^3 \\ &= (2 - 1)^3 + (3 - 1)^3 + (4 - 1)^3 \end{aligned}$$

\sum^R_S Maxims

What are input + output types?

What variable will you return?

How do you handle the simplest case?

Can you generalize?