

Summation
in terms
of "n"

$$\sum_{k=1}^n 1 \rightarrow n$$

$$\sum_{k=1}^n k \rightarrow \frac{n(n+1)}{2}$$

$$\sum_{k=1}^n k^2 \rightarrow \frac{n(n+1)(2n+1)}{6}$$

$$\sum_{k=1}^n k^3 \rightarrow \frac{n^2(n+1)^2}{4}$$