Derive the formula for the following summation:

$$\sum_{i=m}^{n} c = f(c, n, m)$$

→ Given constants $c, n,$ and $m,$

if $m=1$: $\sum_{i=1}^{n} c = cn = c(n-1+1)$ we need to add 1 since we have n terms, not $n-1$ terms.

upper bound ↑

↓ lower bound

if $m=2$: $\sum_{i=2}^{n} c = c(n-1) = c(n-2+1).$

↳ $cn - c$

⋮

then $\sum_{i=m}^{n} c = c(n-m+1).$

Closed form formula:

$$f(c, n, m) = c(n-m+1).$$

Lower bound ↑

↓   ↳ offset

upper bound