# Select Sort

Upper loop $(n-1$

Inner loop $(N-2)$

$(n-k)$

$= (n-1) + (N-2) + (N-3) \ldots + 2 + 1$

$= 1 + 2 + 3 + \ldots + (N-3) + (n-2)$

$= [n * (n-1)/2]$

$T(N) = (n * (n-1)/2) + (n-1$

$T(N) = (n^2 - n)/2 + (n-1)$

$T(N) = (n^2 - n + 2n - 2)/2$

$T(N) = (n^2 + n - 2)/2$

Dominant term is $n^2$

$O(n^2)$