

INSERTION-SORT(A, n)

cost *times*

for $j = 2$ **to** n

c_1 n

$key = A[j]$

c_2 $n - 1$

 // Insert $A[j]$ into the sorted sequence $A[1 \dots j - 1]$.

0 $n - 1$

$i = j - 1$

c_4 $n - 1$

while $i > 0$ and $A[i] > key$

c_5 $\sum_{j=2}^n t_j$

$A[i + 1] = A[i]$

c_6 $\sum_{j=2}^n (t_j - 1)$

$i = i - 1$

c_7 $\sum_{j=2}^n (t_j - 1)$

$A[i + 1] = key$

c_8 $n - 1$