

	cost	time.
1 Insertion-Sort(A)		
for j = 2 to A.length	2 c_1	n
$i = j - 1$	3 c_2	$n - 1$
Key = A[j]	4 c_3	$n - 1$
Best? worst? * While $i > 0$ & A[i] > Key	5 c_4	$\sum_{j=2}^n t_j$
A[i+1] = A[i]	6 c_5	$\sum_{j=2}^n (t_j - 1)$
$i = i - 1$	7 c_6	$n - 1$
A[i+1] = Key.	8 c_7	$n - 1$

$$T(n) = c_1 n + c_2(n-1) + c_3(n-1) + c_4 \left(\sum_{j=2}^n t_j \right) + c_5 \left(\sum_{j=2}^n (t_j - 1) \right) +$$

$$c_6 \left(\sum_{j=2}^n (t_j - 1) \right) + c_7(n-1)$$

Best case - when everything is sorted, so line 8 is executed only $(n-1)$ times. So we can write.

$$= c_1 n + c_2(n-1) + c_3(n-1) + c_4(n-1) + c_7(n-1).$$

$$= (c_1 + c_2 + c_3 + c_4 + c_7)n - (c_2 + c_3 + c_4 + c_5 + c_6 + c_7)$$