

Cost/time how many times

for  $j = 1$  to  $A.length - 1$  do

key =  $A[j]$

// Insert  $A[j]$  into the sorted sequence  $A[0..j-1]$

$i = j - 1$

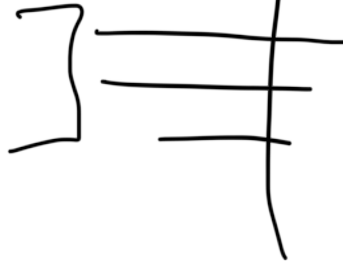
while  $i \geq 0$  and  $A[i] > \text{key}$  do

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

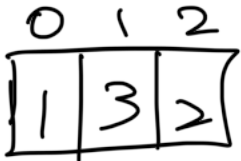
$i = i - 1$

end while

$A[i + 1] = \text{key}$



$C_1$  .  $n$   
 $C_2$  +  $n - 1$   
 $C_3$  +  $n - 1$   
 $C_4$  +  
 $C_5$  +  
 $C_6$  :  
 $C_7$  :  
 $C_8$  +  $n - 1$



$n = 3$  ←  
 $j = 1, 2$  }

$j = 1$

while

$j = 2$

init + condition + inc  
 $\cancel{1} + \cancel{n - 1} + \cancel{n - 1} = \underline{2n}$

$\sum_{j=1}^{n-1}$  to