

## Insertion-Sort/Execution-Counter Worksheet

Assume array  $A$  is indexed from 1 to  $n$ .

INSERTION\_SORT( $A, n$ )

1. **for**  $j \leftarrow 2$  **to**  $n$  **do**
2.      $key \leftarrow A[j]$
3.      $i \leftarrow j - 1$ ;
4.     **while**  $i > 0$  **and**  $A[i] > key$  **do**
5.          $A[i + 1] \leftarrow A[i]$
6.          $i \leftarrow i - 1$
7.      $A[i + 1] \leftarrow key$

Instance 1 : [4, 3, 2, 1]

Instance 2 : [1, 4, 2, 3]

Instance 3 : [5, 4, 3, 2, 1]

Instance 4: Make up your own

	# Times Executed			
Line No	Instance 1	Instance 2	Instance 3	Instance 4
L1				
L2				
L3				
L4				
L5				
L6				
L7				
Total				

List any observations.