Bubble Sort

Alg.: BUBBLESORT(A)

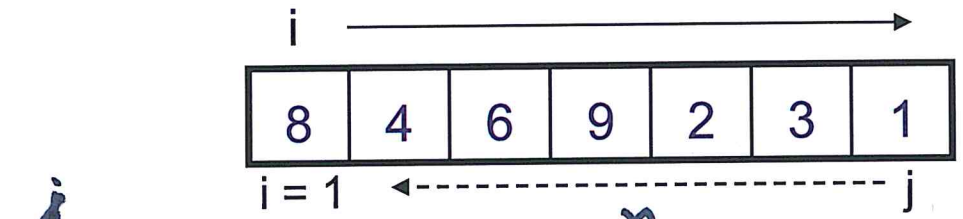
for i ← 1 **to** length[A]

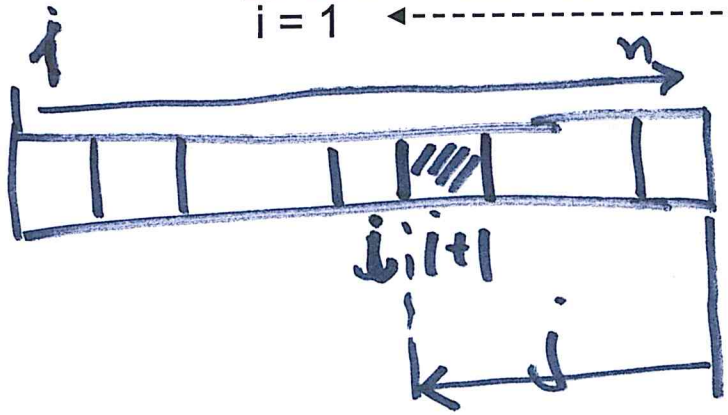
  do for j ← length[A] **downto** i + 1

    do if A[j] < A[j -1]

      then exchange A[j] ⇔A[j-1]

$\leftarrow \sum_{i=1}^{n}(n-i)$ *





$\sum_{i=1}^{n}(n-i+1)$

Selection Sort

Alg.: SELECTION-SORT(*A*)

```
n ← length[A]
for j ← 1 to n - 1
    do smallest ← j
       for i ← j + 1 to n
           do if A[i] < A[smallest]
                 then smallest ← i
       exchange A[j] ⇔ A[smallest]
```