2.

```
InsertionSort(A)
  for j = 2 to A.length
      key = A[j]
      i = j - 1
      while i > 0 & A[i] > key:
          A[i+1] = A[i]
          i = i - 1
      A[i+1] = key
```

Induction.

- True for a trivial case
- assume it is true till n-1
- then prove that n holds true too.

Induction -

① Before the iteration Begins - trivial case it is true

② the array from A[0 → j] is always sorted Before the iteration begins.