

# Insertion Sort with Sentinel

```
A[0] ← -∞
for i = 2 to n do
  t ← A[i]
  j ← i-1
  while t < A[j] do
    A[j+1] ← A[j]
    j ← j-1
  end while
  A[j+1] ← t
end for
```

```
A[0] ← -∞
for i = 2 to n do
  t ← A[i]
  j ← i-1
  while t < A[j] do
    A[j+1] ← A[j]
    j ← j-1
  end while
  A[j+1] ← t
end for
```

# Insertion Sort (without sentinel)

```
for i = 2 to n do
  t ← A[i]
  j ← i-1
  while j>0 and A[j]>t do
    A[j+1] ← A[j]
    j ← j-1
  end while
  A[j+1] ← t
end for
```

```
for i = 2 to n do
  t ← A[i]
  j ← i-1
  while j>0 and A[j]>t do
    A[j+1] ← A[j]
    j ← j-1
  end while
  A[j+1] ← t
end for
```

# Selection Sort

```
for i = n downto 2 do
  k ← 1
  for j = 2 to i do
    if A[j] > A[k] then k ← j
  end for
  A[k] ↔ A[i]
end for
```

```
for i = n downto 2 do
  k ← 1
  for j = 2 to i do
    if A[j] > A[k] then k ← j
  end for
  A[k] ↔ A[i]
end for
```