

# Insertion Sort

Tue 5 MAR 2019

1 5 7 11 23 " + " 6

Where should we " + "  
insert the new number?

→ How? We want that the final list stays sorted

- \* Ans: 1) is it smaller than...? starting from end
- 2) Use Binary Search for asking 1)

let's say we have a func `insertionSort(arr, n)`  
that can sort exactly  $N$  #'s. How would you sort  
 $N+1$  #'s?

`insertionSort(arr, n):` {  
     $\underline{arr1} = arr[:N+1]$  ← size  $N$

`insertionSort(arr1, N)`

loop through  $arr1$  &

    Insert  $arr[N+1]$

Homework for  
tomorrow:

Implement the  
function `InsertSort(arr, n)`