**1) Insertion Sort Steps**

[22, 27, 16, 2, 18, 6]

1. [22, 16, 27, 2, 18, 6]
2. [16, 22, 27, 2, 18, 6]
3. [16, 22, 2, 27, 18, 6]
4. [16, 2, 22, 27, 18, 6]
5. [2, 16, 22, 27, 18, 6]
6. [2, 16, 22, 18, 27, 6]
7. [2, 16, 18, 22, 27, 6]
8. [2, 16, 18, 22, 27, 6]
9. [2, 16, 18, 22, 27, 6]
10. [2, 16, 18, 22, 6, 27]
11. [2, 16, 18, 6, 22, 27]
12. [2, 16, 6, 18, 22, 27]
13. [2, 6, 16, 18, 22, 27]
14. [2, 6, 16, 18, 22, 27]

**2)Big O Notation**

O (n^2)

**3)Time Complexity**

Worst Case:

n!= n\*(n-1)/2= (n^2-n)/2 : n^2

O(n^2)

Average Case:

O(n^2)

Best Case:

O(n)

**4) Which case for 18?**

Average Case

**[7,3,5,8,2,9,4,15,6**] 4 steps for insertion sort?

1. [7,3,5,8,2,9,4,15,6]
2. [2,3,5,8,7,9,4,15,6]
3. [2,3,5,8,7,9,4,15,6]
4. [2,3,4,8,7,9,5,15,6]