

insertion sort

step 1 22, 27, 16, 2, 18, 6

step 2 22, 27, 16, 2, 18, 6

step 3 22, 27, 16, 2, 18, 6 → 16, 22, 27, 2, 18, 6

step 4 16, 22, 27, 2, 18, 6 → 2, 16, 22, 27, 18, 6

step 5 2, 16, 22, 27, 18, 6 → 2, 16, 18, 22, 27, 6

step 6 2, 16, 18, 22, 27, 6 → 2, 6, 16, 18, 22, 27

$O(n^2)$

average case

selection sort

step 1 [7, 3, 5, 8, 2, 9, 15, 6] → [2, 3, 5, 8, 7, 9, 15, 6]

step 2 [2, 3, 5, 8, 7, 9, 15, 6]

step 3 [2, 3, 5, 8, 7, 9, 15, 6]

step 4 [2, 3, 5, 8, 7, 9, 15, 6] → [2, 3, 5, 6, 7, 9, 15, 8]