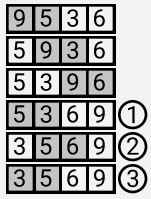
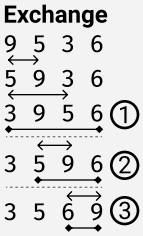
Bubble



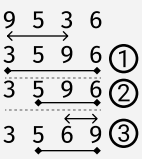
- worst O(n²)
- best Ω(n)
- n-1 max pass
- sensitive

Exchange



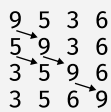
- O(n²)
- n-1 max pass
- not sensitive
- swaps [i] w/ next smallest

Selection



- O(n²)
- n-1 max pass
- not sensitive
- swaps [i] w/ min value

Insertion

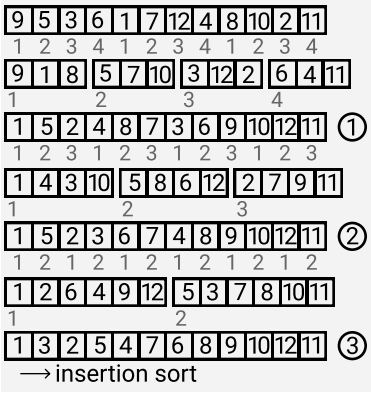


- worst O(n²)
- best Ω(n)
- n-1 max pass
- sensitive
- [i] selects
- [j] inserts

Shell

- O(n^3/2)
- pass=gap-decriment
- not sensitive

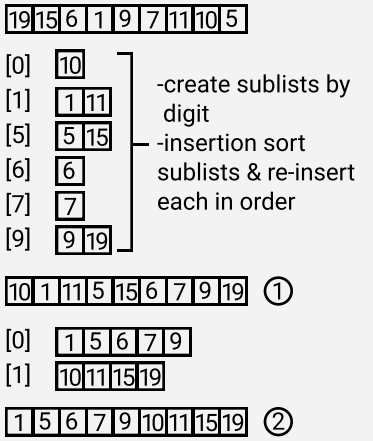
```
for(k=1);k≦n/9;k=3*l+1){}
```



⟶ insertion sort

Bucket

- O(n)
- not sensitive

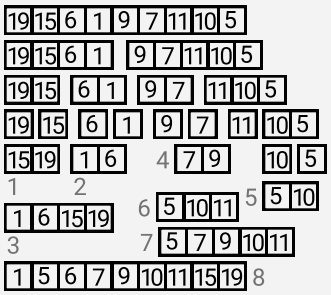


-create sublists by digit
-insertion sort sublists & re-insert each in order

Merge

- O(n log n)
- not sensitive

*always left first



⟷ = swap
⟷ = no swap

***use ptrs**
***eval LCV once**
***inline swap**

STL

sort():O(n log n)
find():O(n)
reverse():O(n)
swap():O(n)→O(n²)

Vector

size():O(1)
clear():O(n)
insert():O(n)
emplace():O(n)
erase():O(n)
push_back():O(1)
emplace_back():O(n)
pop_back():O(1)
resize():O(n)
swap():O(1)

Matrix

1. resize(): allocate row ptrs
2. [i].resize(): alloc. columns

-els of row will be contiguous
-rows themselves may not be contiguous