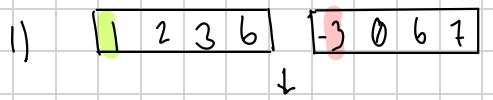
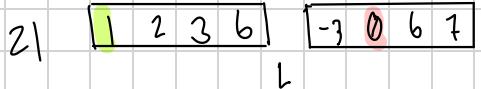


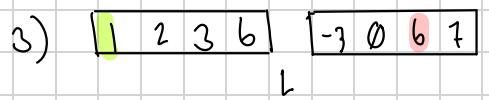
① Merge-Sort



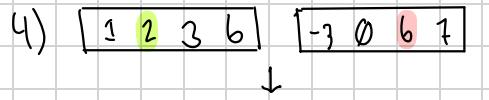
-3



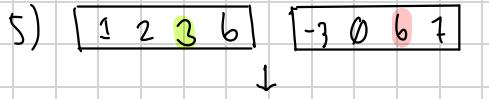
-3 0



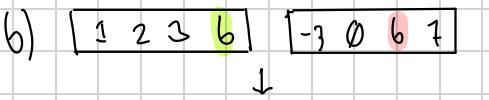
-3 0 1



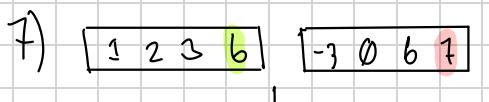
-3 0 1 2



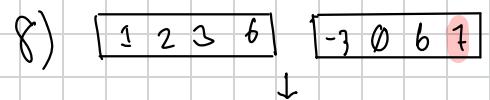
-3 0 1 2 3



-3 0 1 2 3 6



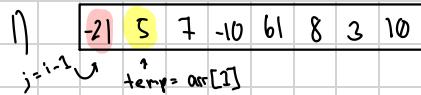
-3 0 1 2 3 6 6



-3 0 1 2 3 6 6 7

↑
Sorted array

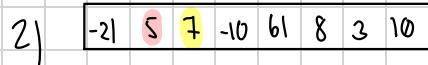
② insertion Sort

1) 

-21	5	7	-10	61	8	3	10
-----	---	---	-----	----	---	---	----

$j = i-1$

$\text{temp} = \text{arr}[1]$

2) 

-21	5	7	-10	61	8	3	10
-----	---	---	-----	----	---	---	----

3) 

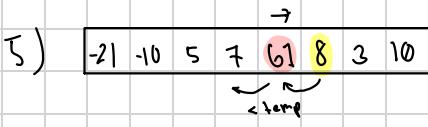
-21	5	7	yellow	-10	61	8	3	10
-----	---	---	--------	-----	----	---	---	----

temp

4) 

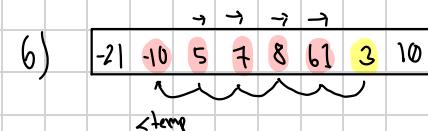
-21	-10	5	red	61	yellow	8	3	10
-----	-----	---	-----	----	--------	---	---	----

temp

5) 

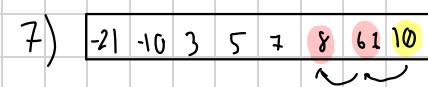
-21	-10	5	7	61	yellow	8	3	10
-----	-----	---	---	----	--------	---	---	----

temp

6) 

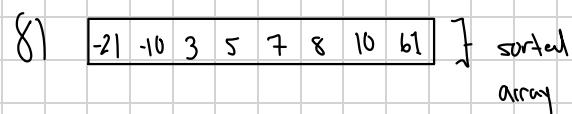
-21	-10	5	7	8	61	3	10
-----	-----	---	---	---	----	---	----

temp

7) 

-21	-10	3	5	7	8	61	yellow
-----	-----	---	---	---	---	----	--------

temp

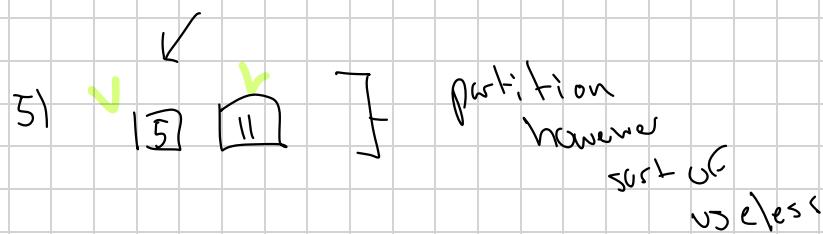
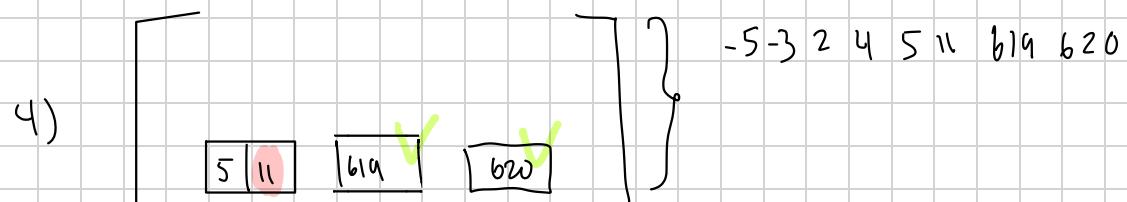
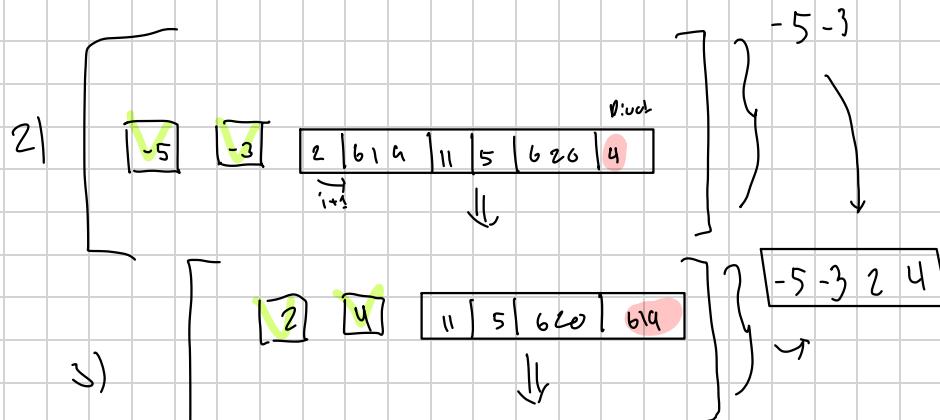
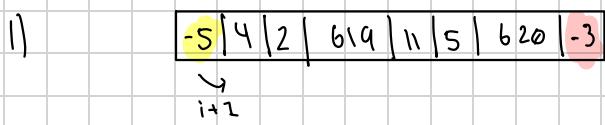
8) 

-21	-10	3	5	7	8	10	61
-----	-----	---	---	---	---	----	----

} sorted
array

③ Quick Sort

Point



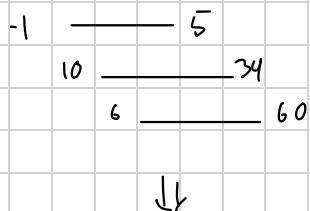
Sorted Array

-5	-3	2	4	5	11	619	620
----	----	---	---	---	----	-----	-----

⑨ Shell Sort

5	10	60	0	-1	34	6	10
---	----	----	---	----	----	---	----

gap = 4



-1	10	6	0	5	34	60	10
-1	6						
0	10						
5	↓	6					
10	↓	34					
6		60					
10		34					

gap 2

1	0	5	10	6	10	60	34
---	---	---	----	---	----	----	----

gap 1 (insertion sort)

1	0	5	10	6	10	60	34
---	---	---	----	---	----	----	----

1	0	5	10	6	10	60	34
---	---	---	----	---	----	----	----

1	0	5	10	6	10	60	34
1	0	5	10	6	10	60	34

→

↔
<temp

1	0	5	6	10	10	60	34
---	---	---	---	----	----	----	----

1	0	5	6	10	10	60	34
---	---	---	---	----	----	----	----

→

↔
<temp