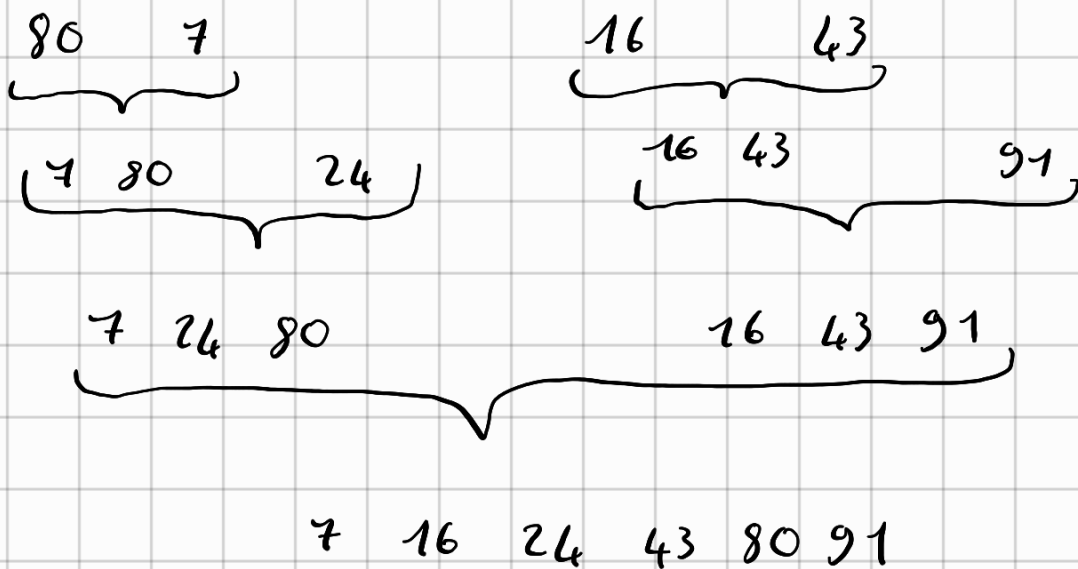
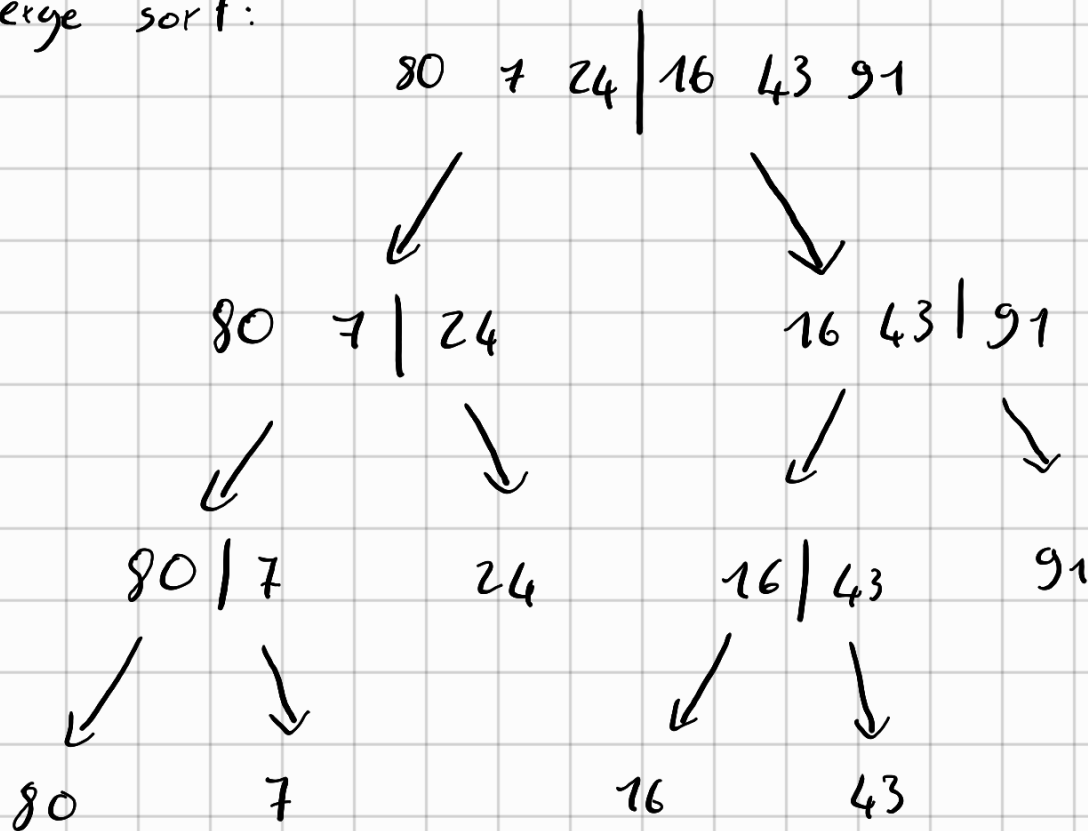
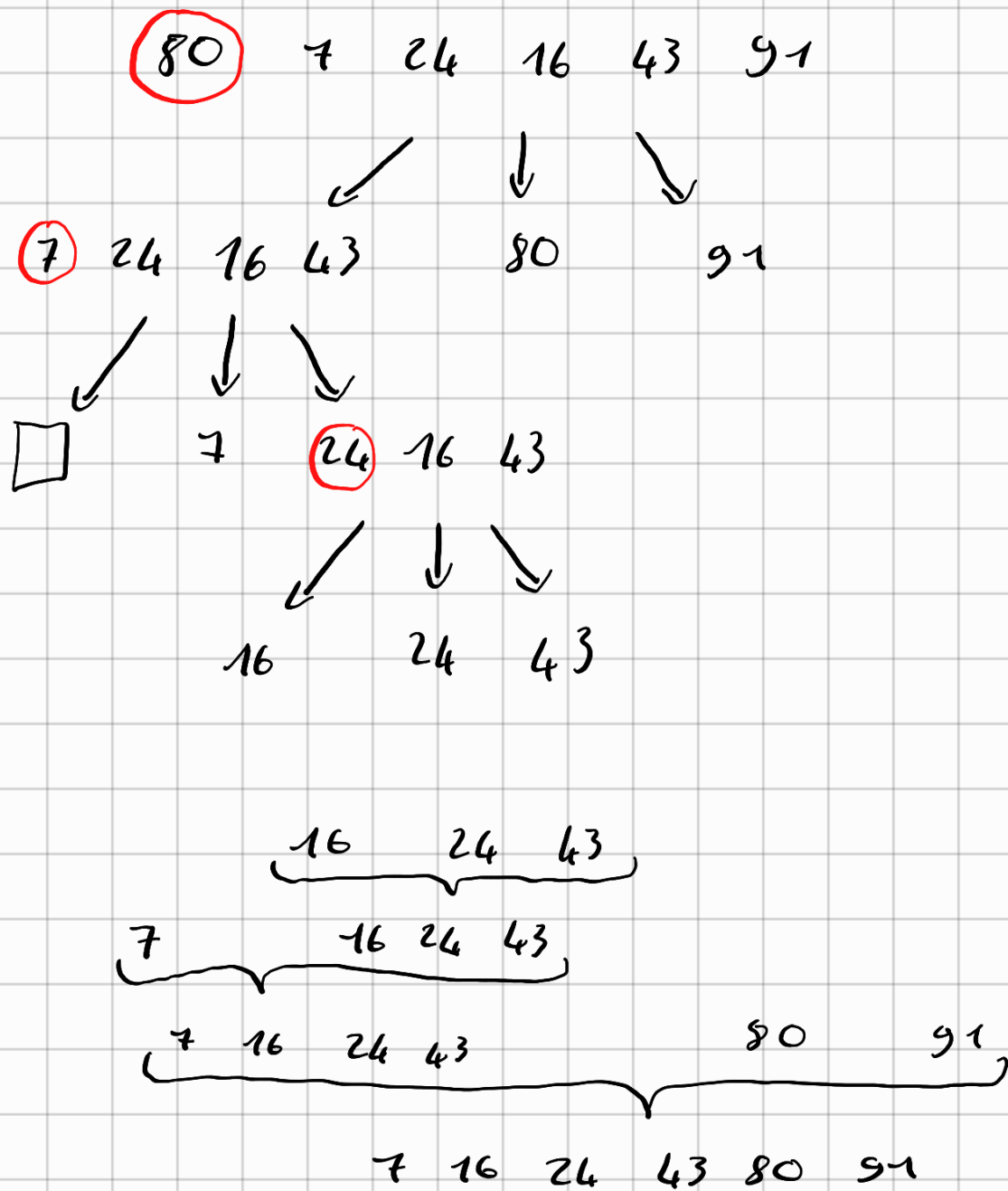


Assignment 1.1

Merge sort:



Quick sort:



Assignment 1.2

Radix sort: ①

135, 56, 21, 89, 395, 7, 178, 19, 96, 257, 34, 29

0	
1	21
2	
3	
4	34

5	135, 395
6	56, 96,
7	7, 257
8	178
9	89, 19, 29

21, 34, 135, 395, 56, 96, 7, 257, 178, 89, 19, 29

0	7
1	19
2	21, 29
3	34, 135
4	

5	56, 257
6	
7	178
8	89
9	395, 96

7, 19, 21, 29, 34, 135, 56, 257, 178, 89, 395, 96

0	7, 19, 21, 29, 34, 56, 89, 96	5
1	135, 178	6
2	257	7
3	395	8
4		9

7, 19, 21, 34, 56, 89, 96, 135, 178, 257, 395

②

1,25 2,46 0,34 8,67 3,21 1,09 3,33 0,02 5,44 7,78 1,93 4,22

0		5	1,25
1	3,21	6	2,46
2	0,02 ; 4,22	7	8,67
3	3,33 ; 1,93	8	7,78
4	0,34 ; 5,44	9	1,09

3,21 0,02 4,22 3,33 1,93 0,34 5,44 1,25 2,46 8,67 7,78 1,09

0	0,02 ; 1,09	5	
1		6	8,67
2	3,21 ; 4,22 ; 1,25	7	7,78
3	3,33 ; 0,34	8	
4	5,44 ; 2,46	9	1,93

0,02 1,09 3,21 4,22 1,25 3,33 0,34 5,44 2,46 8,67 7,78 1,93

0	0,02 ; 0,34	5	5,44
1	1,09 ; 1,25 ; 1,93	6	
2	2,46	7	7,78
3	3,21 ; 3,33	8	8,67
4	4,22	9	

0,02 0,34 1,09 1,25 1,93 2,46 3,21 3,33 4,22 5,44

7,78 8,67

③

MS VA AK LA CA AL GA TN WA DC

A	VA, LA, CA, GA, WA	S		S	MS
B		K	AK	T	
C	DC	L	AL	U	
D		M		V	
E		N	TN	W	
F		O		X	
G		P		Y	
H		Q		Z	
I		R			

VA LA CA GA WA DC AK AL TN MS

A	AK, AL	S	S
B		K	T
C	CA	L	U
D	DC	M	V
E		N	W
F		O	X
G	GA	P	Y
H		Q	Z
I		R	

AK AL CA DC GA LA MS TN VA WA

Assignment 1.3

Stable sorts:

• Bubble sort : 3 4 2_A 2_B 1

3 2_A 2_B 1 4

2_A 2_B 1 3 4

2_A 1 2_B 3 4

1 2_A 2_B 3 4

• Selection sort: 3 4 2_A 2_B 1 (select always the first smallest)

1 2_A 2_B 3 4

• Insertion sort: 3 4 2_A 1 2_B

3

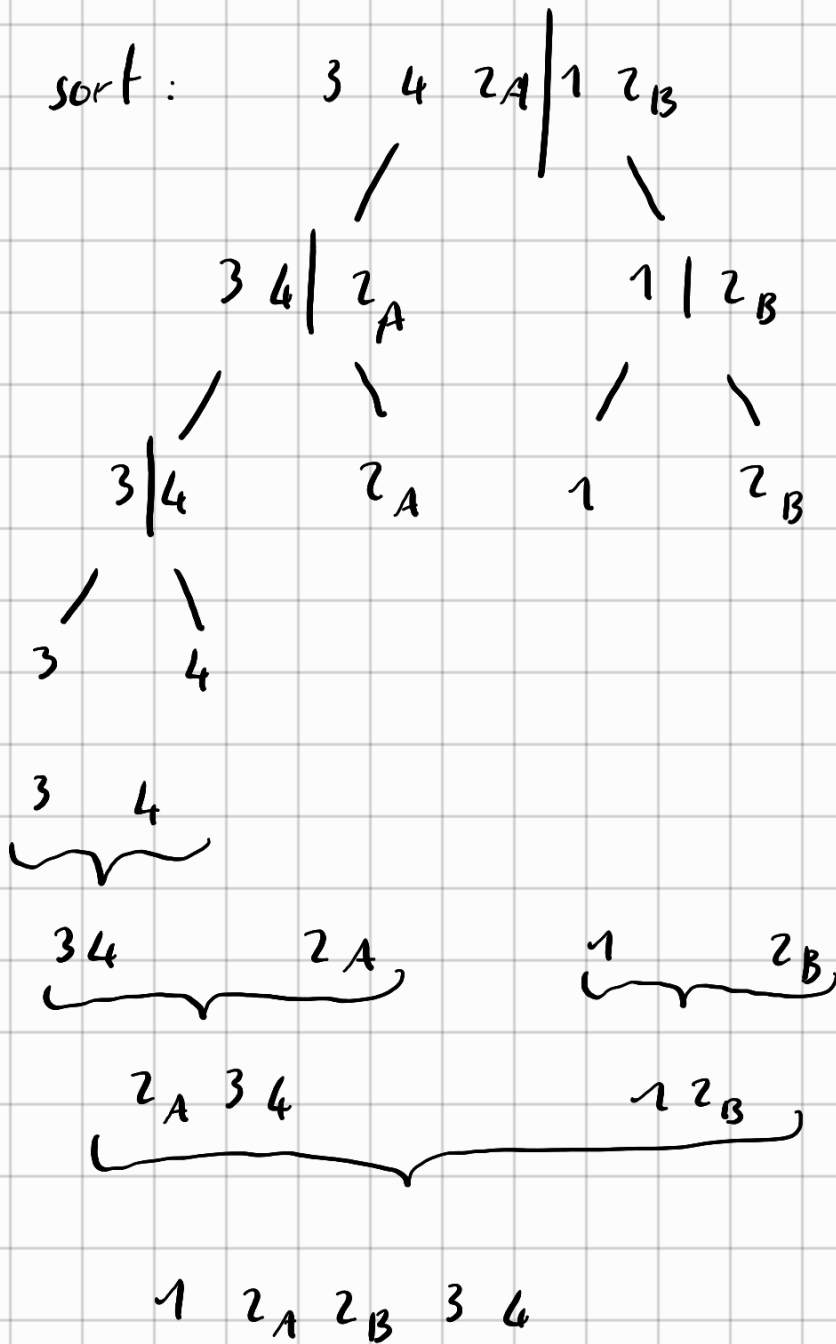
3 4

2_A 3 4

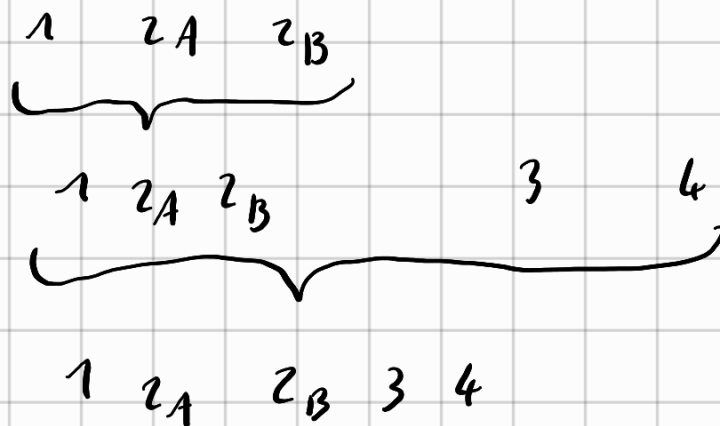
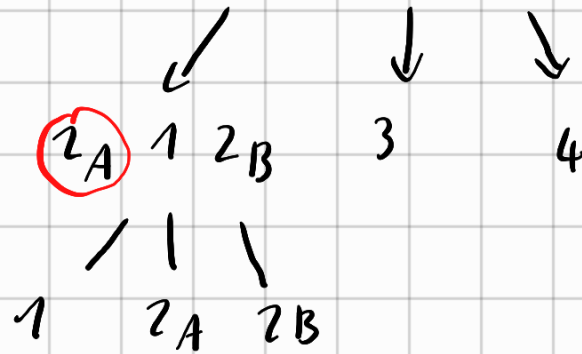
1 2_A 3 4

1 2_A 2_B 3 4

• Merge sort:



• Quick sort: $(3) 4 2_A 1 2_B$



All of the algorithms seen are stable.