

1

ARRAY INDEX FROM 1!

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	3	3	4	7	9	2	6	4	5	7	9	0	1	3

0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0

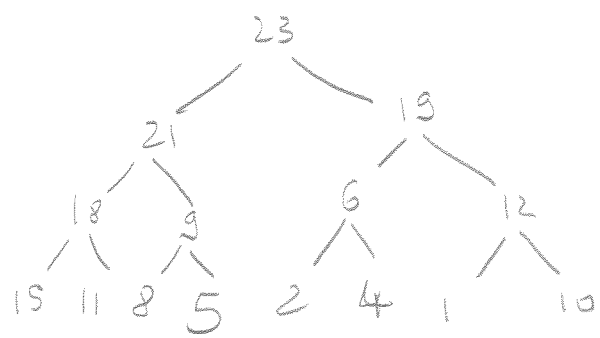
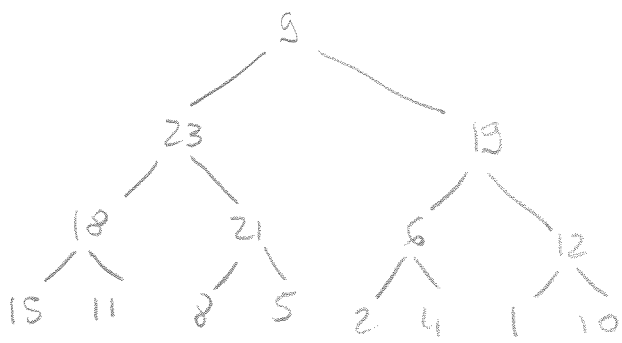
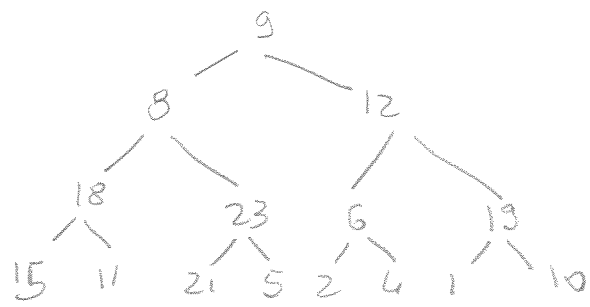
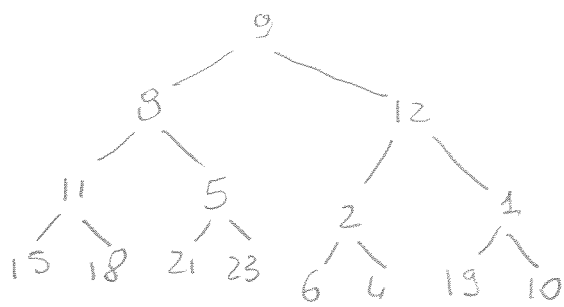
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1	3	4	7	5	10	11	13	13	5
0	2	3	6	8	9	10	12	14	
	0		5	7		11	13		

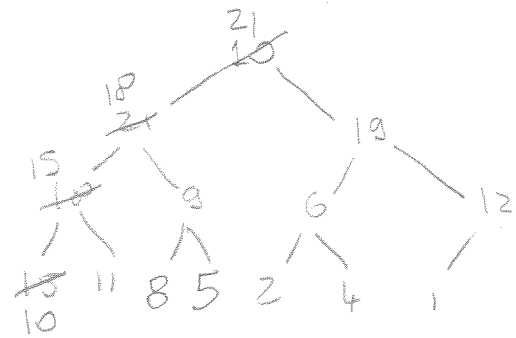
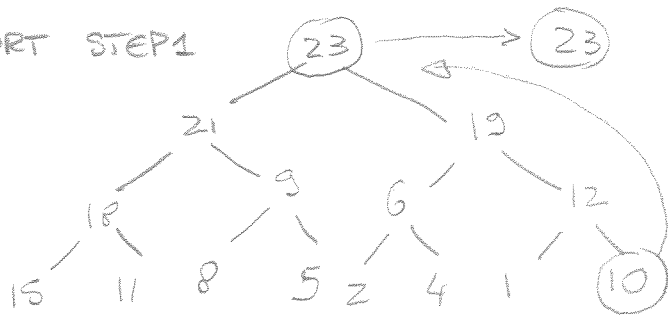
1	2	3	4	5	6	7	8	9	10	12	14		
0	1	2	2	3	3	4	4	5	6	7	7	8	9
									11	13	15		

$$B[C[A[J]]] = A[J]$$

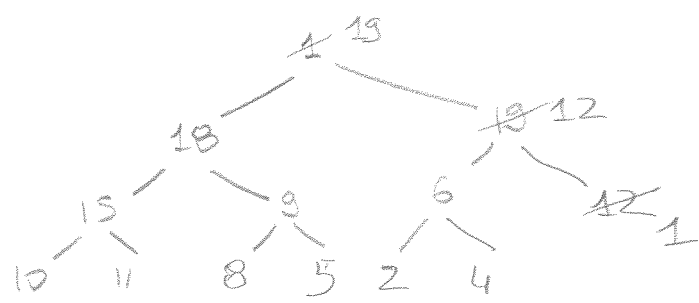
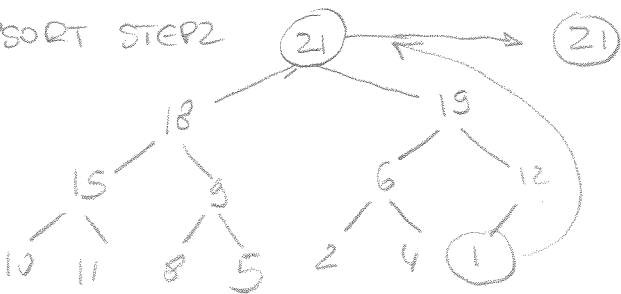
2



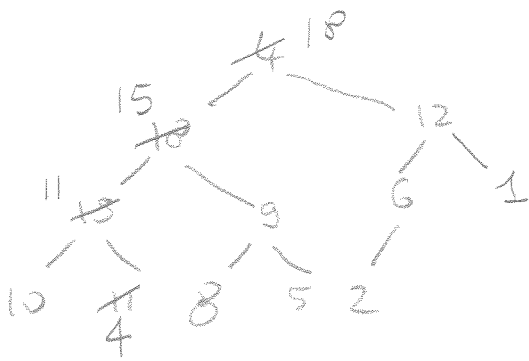
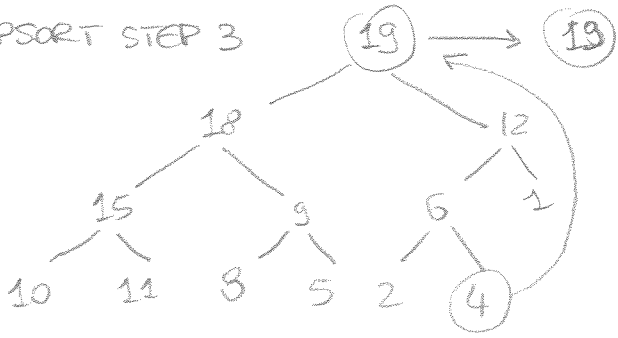
HEAPSORT STEP 1



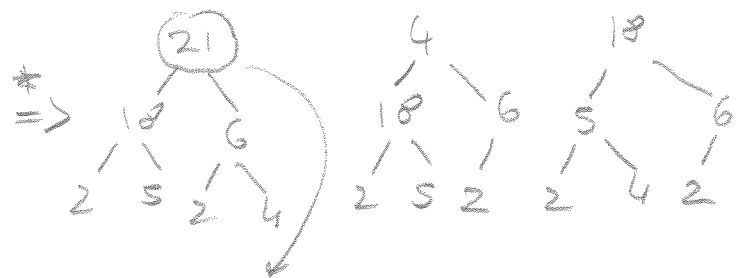
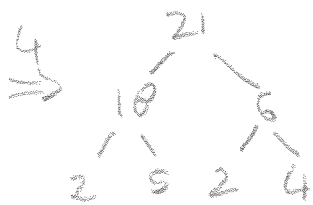
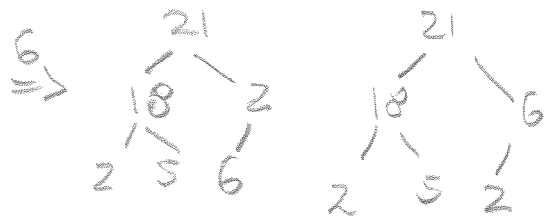
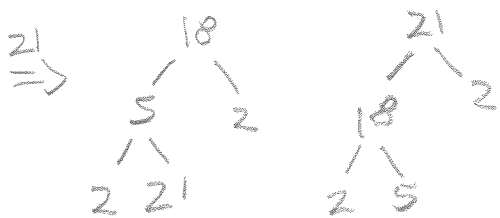
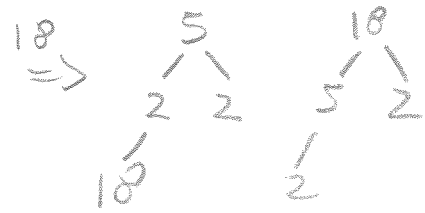
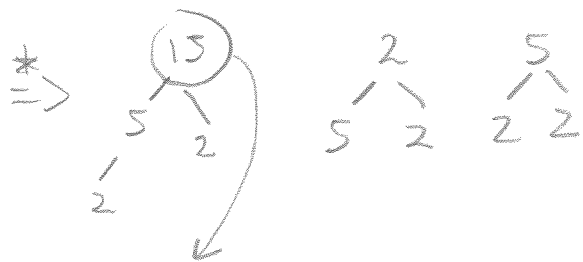
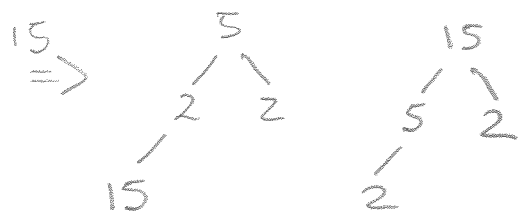
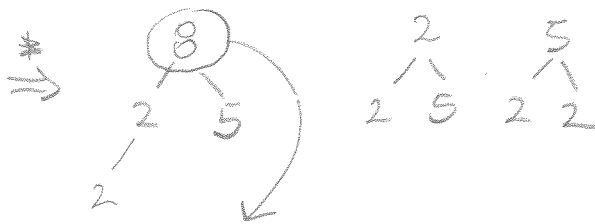
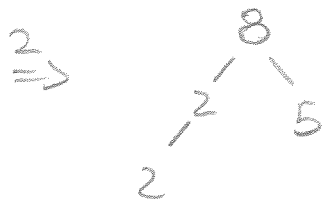
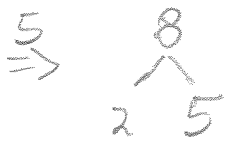
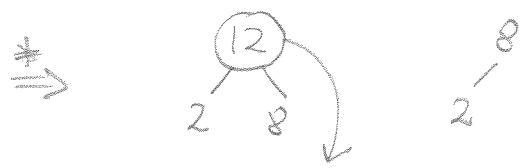
HEAPSORT STEP 2



HEAPSORT STEP 3



③

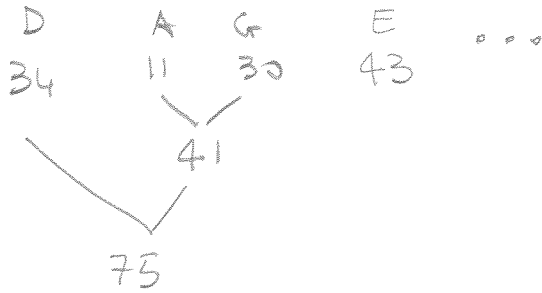


④

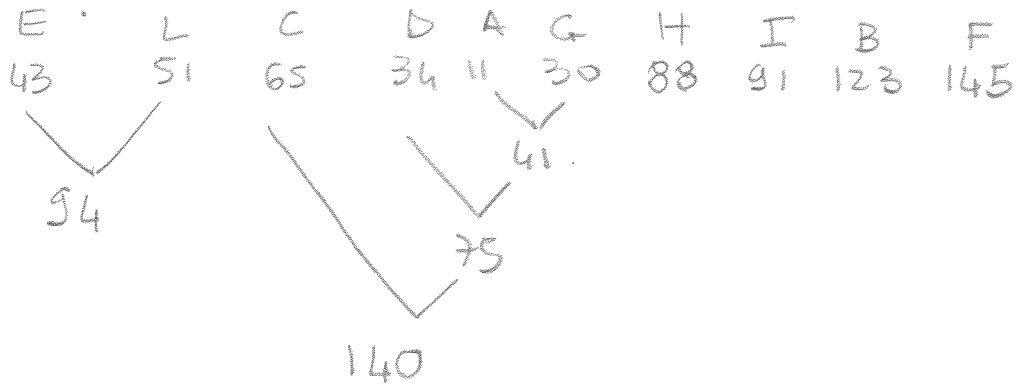
A 11 G 30 D 34 E 43 L 51 C 65 H 88 I 91 B 123 F 145



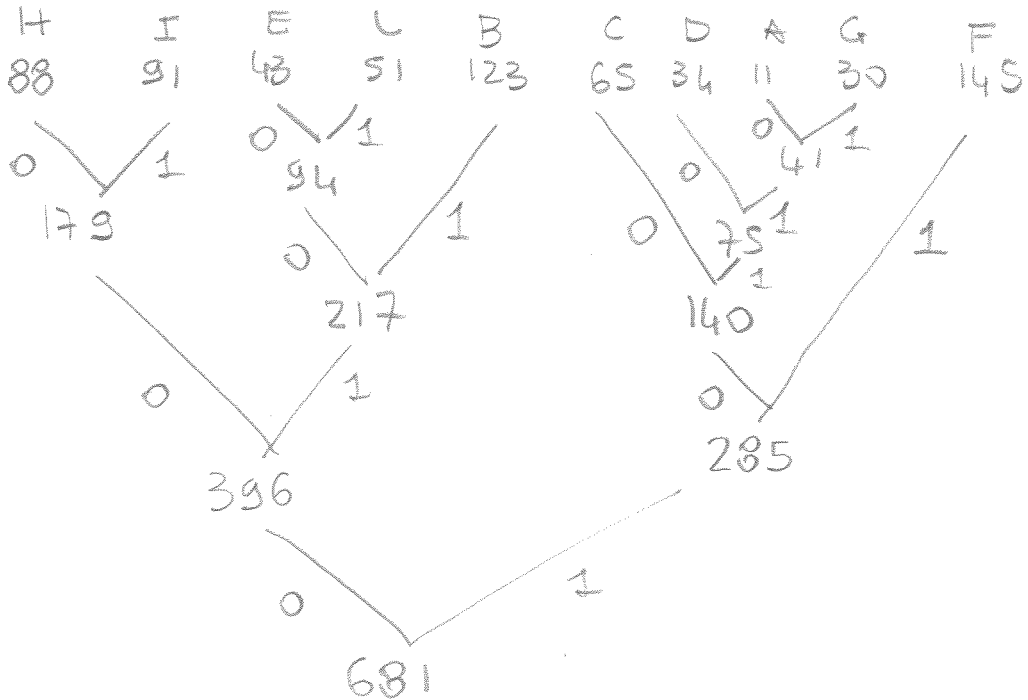
~ o ~ o ~ o ~ o



~ o ~ o ~ o ~ o



~ o ~ o ~ o ~ o



000 = H

001 = I

0100 = E

0101 = L

011 = B

100 = C

1010 = D

10110 = A

10111 = G

11 = F

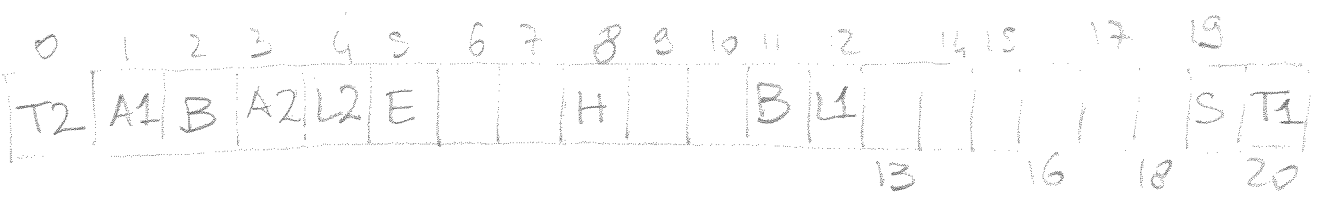
5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

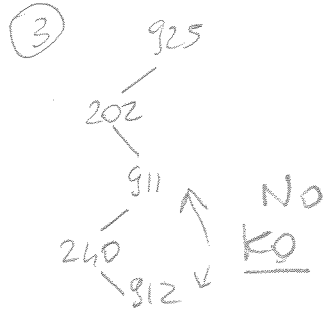
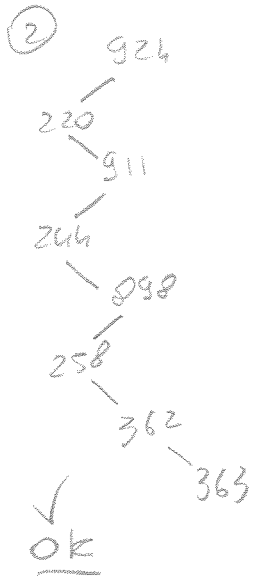
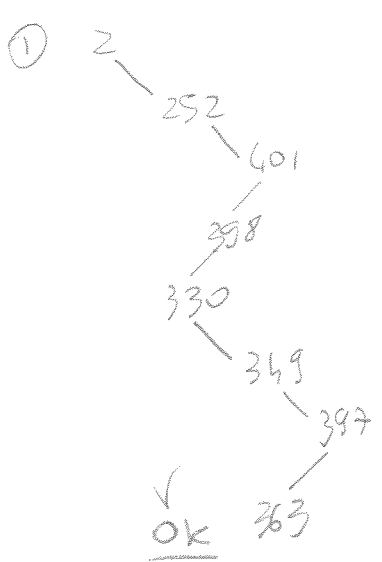
$$h(k) = (k \bmod 21 + i \cdot (1 + k \bmod 20)) \bmod 21$$

T1 20  
 H 8  
 E 5  
 L1 12  
 A1 1  
 S 19  
 T2 20  
 L2 12  
 A2 1  
 B 2

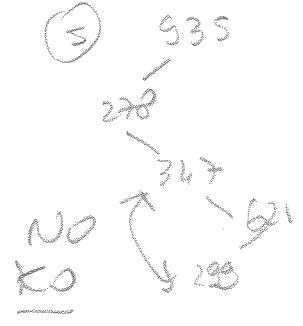
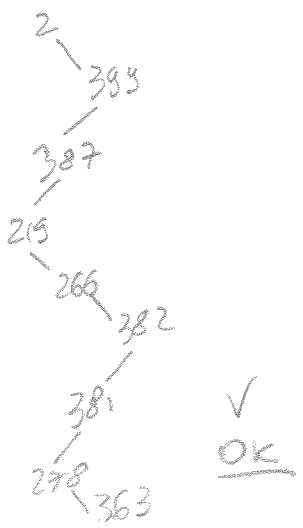
$20 \star \Rightarrow 20 \bmod 21 + 1 \cdot (1 + 20 \bmod 20) = 20 + 1 \cdot 1 = 21 \bmod 21 = 0$   
 $12 \star \Rightarrow 12 \bmod 21 + 1 \cdot (1 + 12 \bmod 20) = 12 + 1 \cdot (1 + 12) = 25 \bmod 21 = 4$   
 $1 \star \Rightarrow 1 \bmod 21 + 1 \cdot (1 + 1 \bmod 20) = 1 + 1 \cdot (1 + 1) = 3$



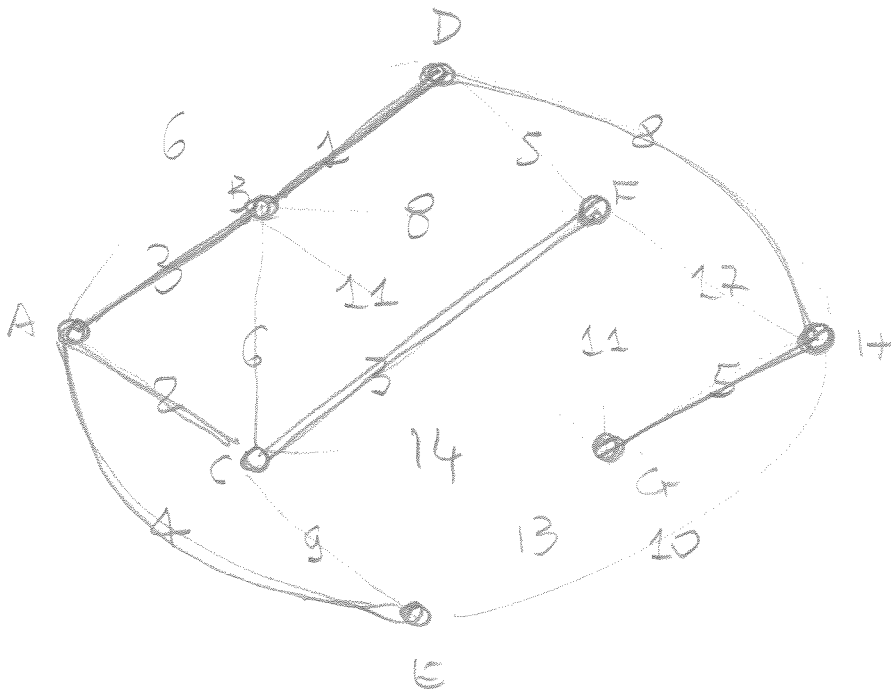
6



4

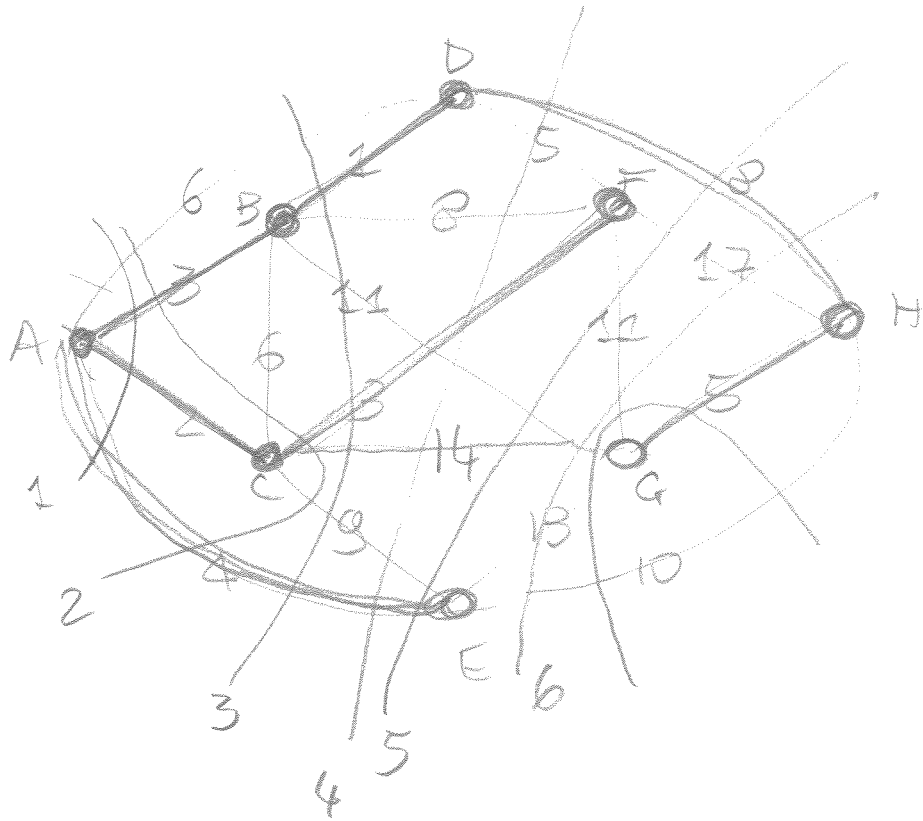


7



Kruskal

BD	1
AC	2
AB	3
CF	3
AE	4
GH	5
DH	8
<hr/>	
MST	26



Prim

AC	2
AB	3
BD	1
CF	3
AE	4
DH	8
HG	5
<hr/>	
MST	26