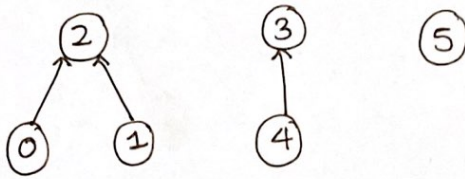
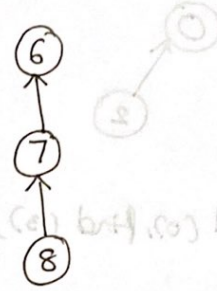


# Assignment 08.

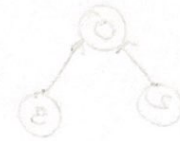
Q1)



(5) brief, (0) brief) noisier

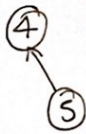


(6) brief, (8) brief) noisier

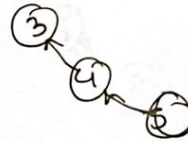


Q2)

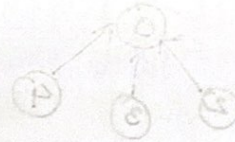
union(4, 5)



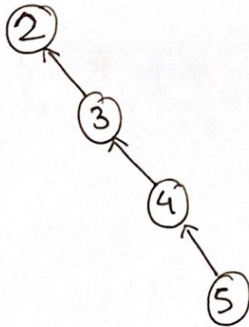
union(3, 4)



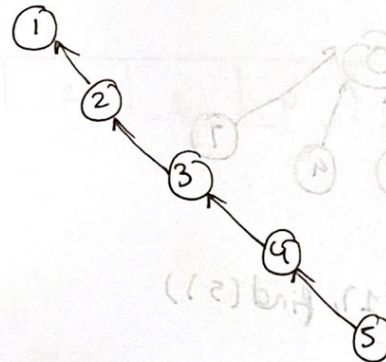
((4) brief, (0) brief) noisier



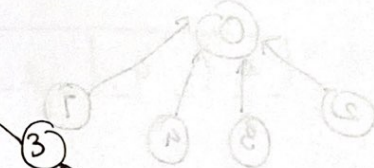
union(2, 3)



union(1, 2)

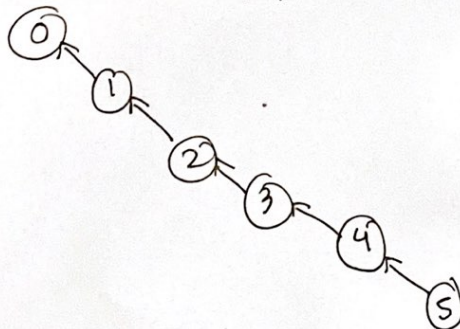


((1) brief, (0) brief) noisier



((2) brief, (5) brief) noisier

union(0, 1)



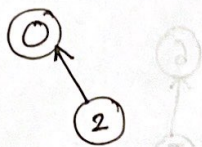
The running time to find (5) is  $O(N)$

((8) brief, (2) brief) noisier

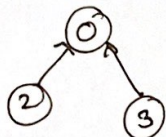


Q3)

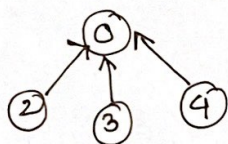
union(find(0), find(2))



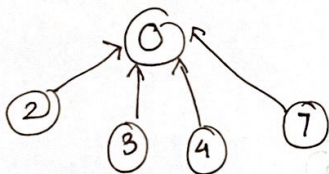
union(find(0), find(3))



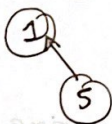
union(find(0), find(4))



union(find(0), find(7))



union(find(1), find(5))

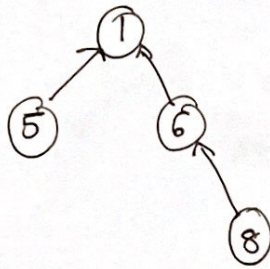


union(find(6), find(8))





union(find(5), find(8))



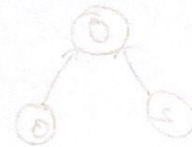
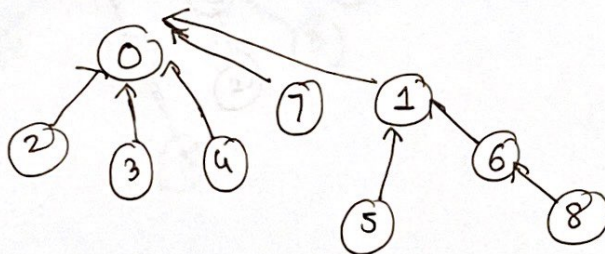
(5)

(5) brief, (0) brief, no union

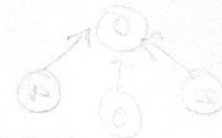


(6) brief, (0) brief, no union

union(find(7), find(8))



(14) brief, (0) brief, no union



Q4)

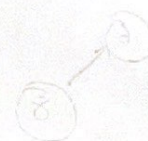
-9	0	0	0	0	1	1	0	6
0	1	2	3	4	5	6	7	8

(13) brief, (0) brief, no union

(0) brief, (0) brief, no union



(8) brief, (0) brief, no union

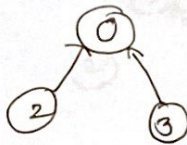


Q5)

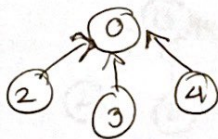
union (find(0), find(2))



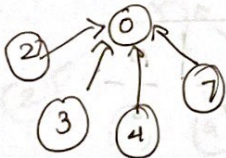
union (find(0), find(3))



union (find(0), find(4))



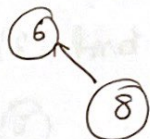
union (find(0), find(7))



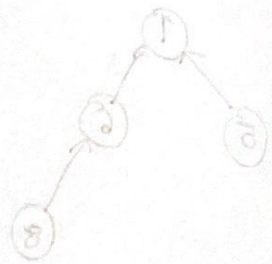
union (find(4), find(5))



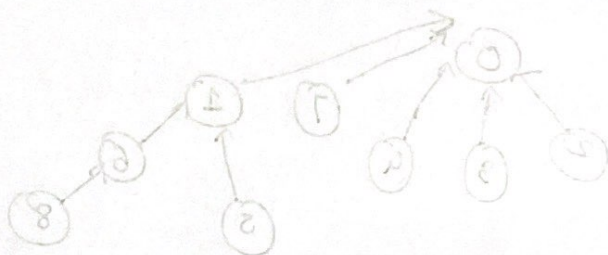
union (find(0), find(8))



1 = find(1) brief) no



((8) brief, (1) brief) no

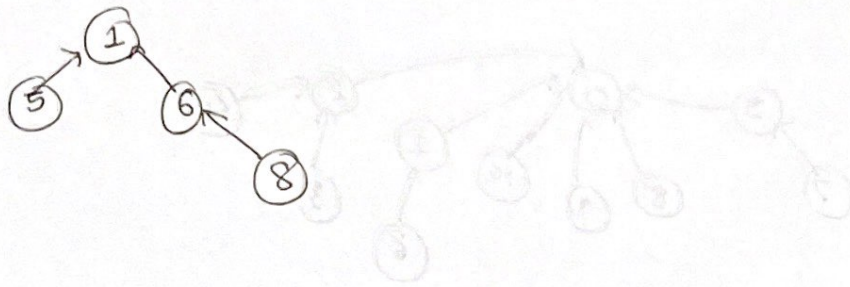


(H9)

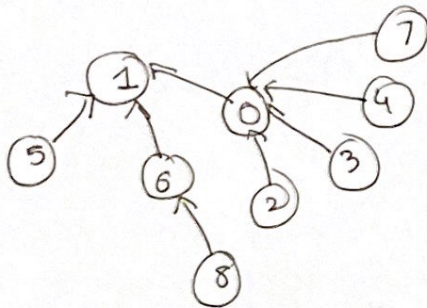




union find (5), find (8)



union (find (7), find (8))



Q6)

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

Q7)

-1	0	0	2	2	0	1	5	0	0	0
0	1	2	3	4	5	6	7	8	9	10

Q8)

