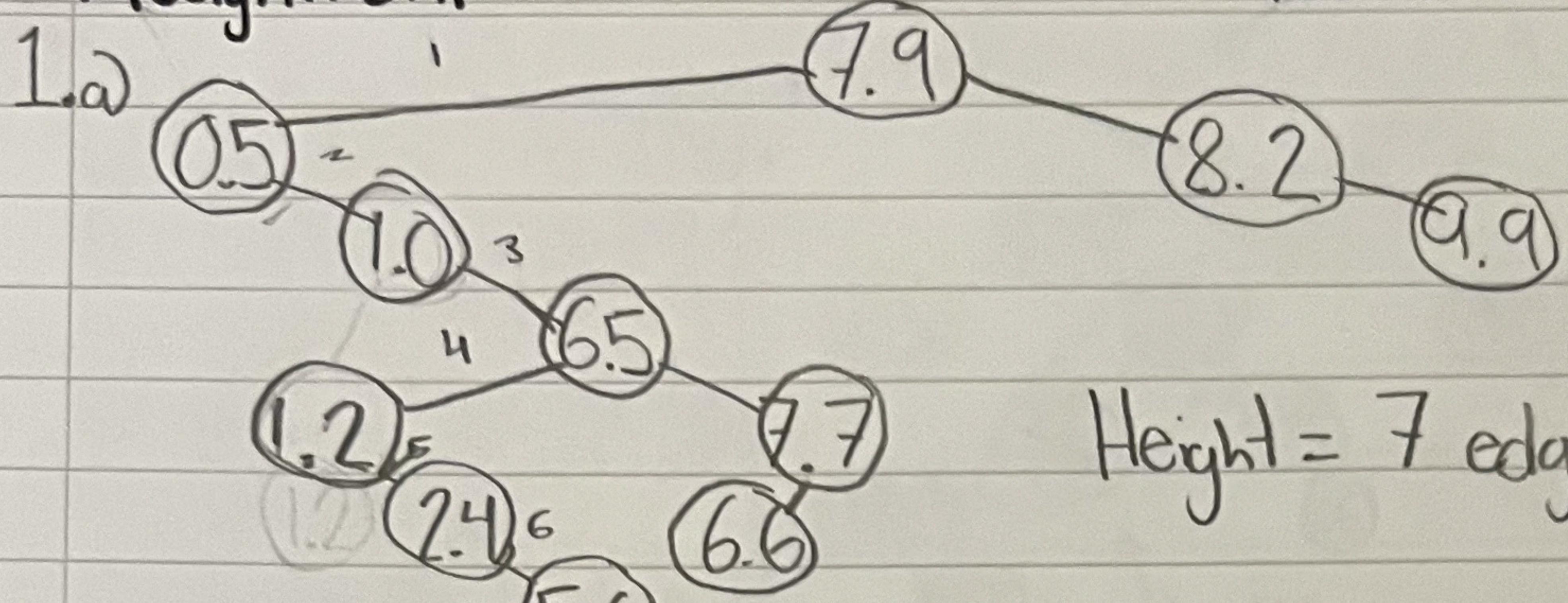


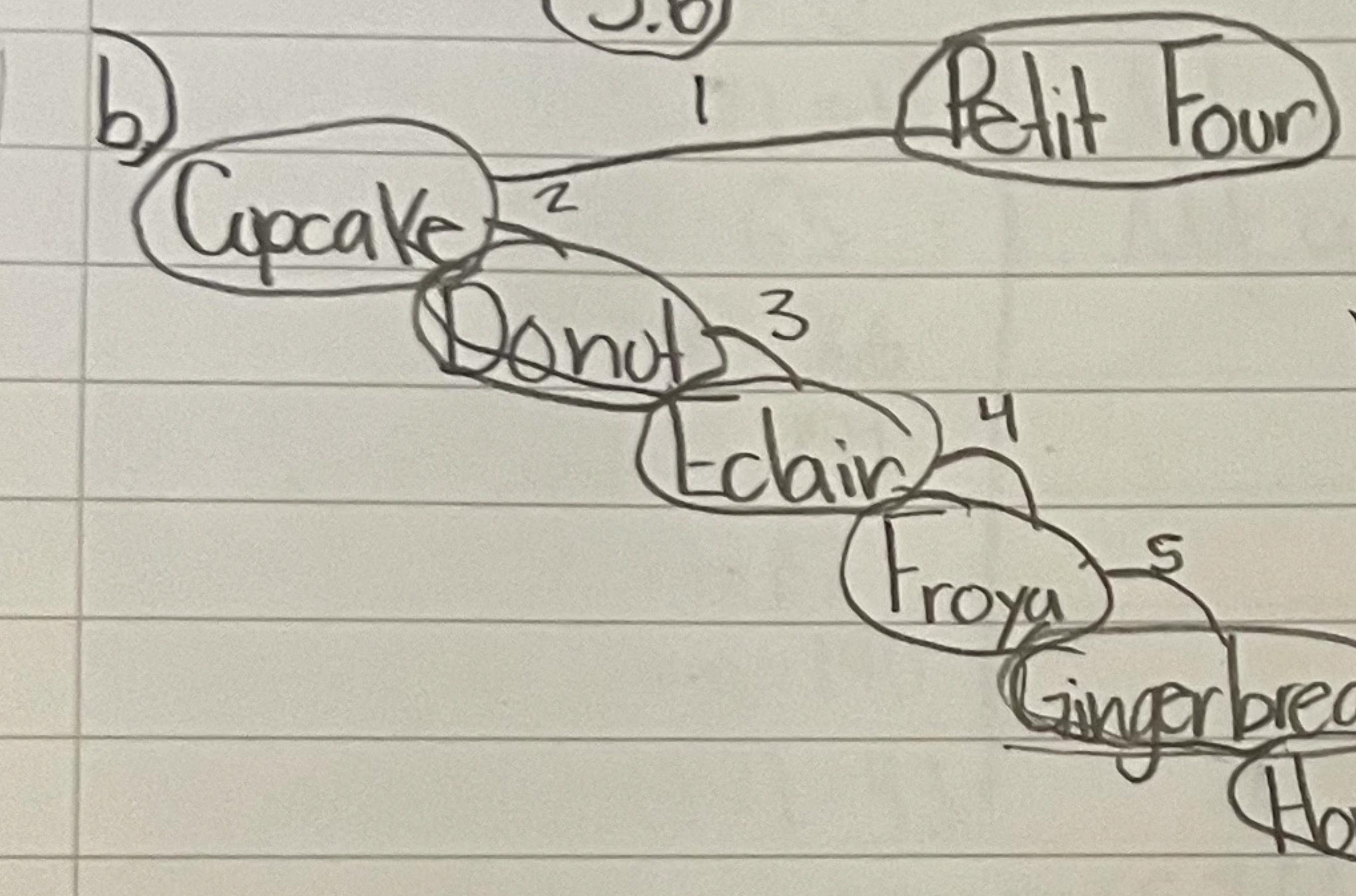
Assignment 6

Kevin G.

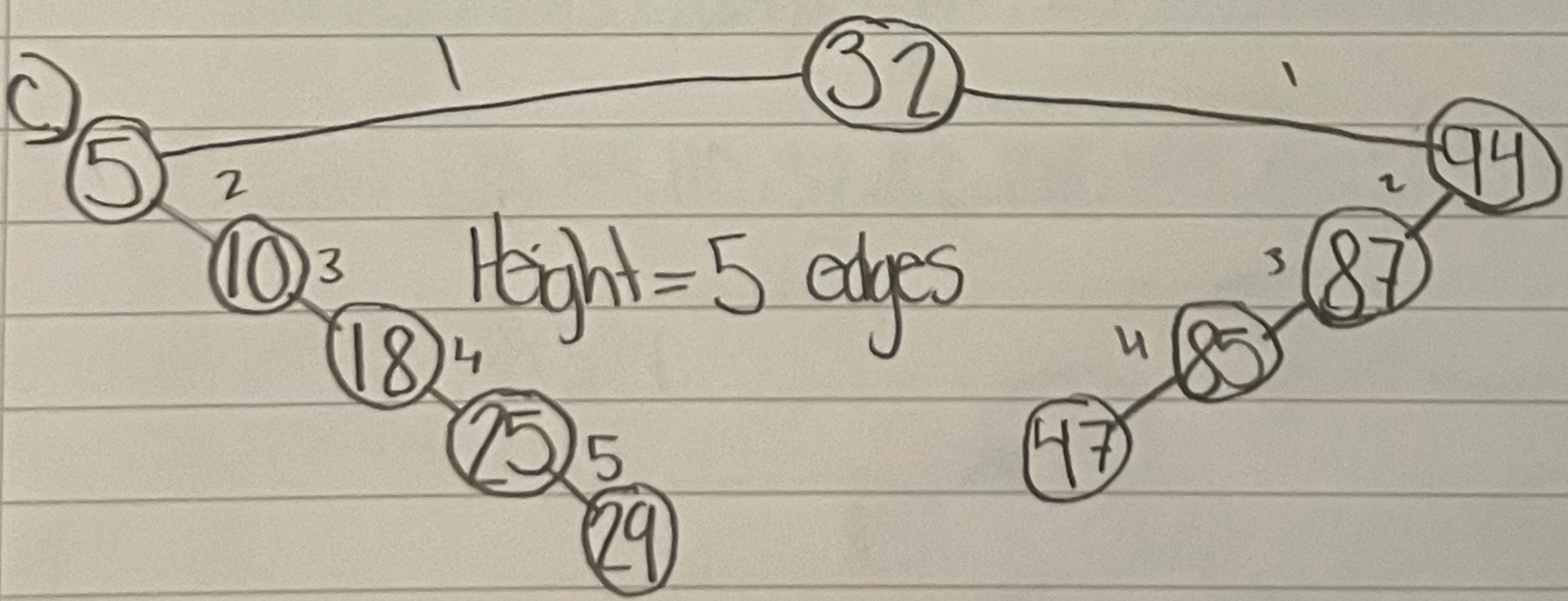
date / /



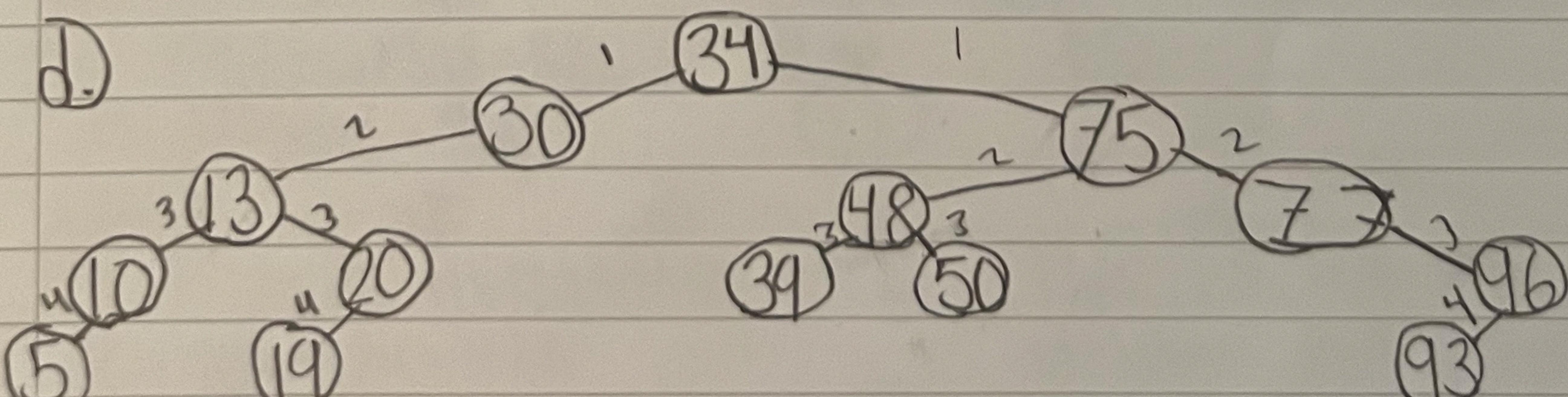
Height = 7 edges



Height = 6 edges



Height = 5 edges



Height = 4 edges

date / /

2.a) Pre order: [68, 21, 15, 54, 46, 36, 37, 59, 65, 92, 80, 87, 97, 93]

$$68 = 68 + 21 + (92 \cdot 2) = 273$$

$$21 = 21 + 15 + (54 \cdot 2) = 144$$

$$15 = 0 + (0 \cdot 0) = 0 = 15$$

$$54 = 54 + 46 + (59 \cdot 2) = 218$$

$$46 = 46 + 36 = 82$$

$$36 = 36 + 0 + (37 \cdot 2) = 110$$

$$37 = 37 + 0 + (0 \cdot 2) = 37$$

$$59 = 59 + 0 + (65 \cdot 2) = 189$$

$$65 = 65 + 0 + (0 \cdot 2) = 65$$

$$92 = 92 + 80 + (97 \cdot 2) = 366$$

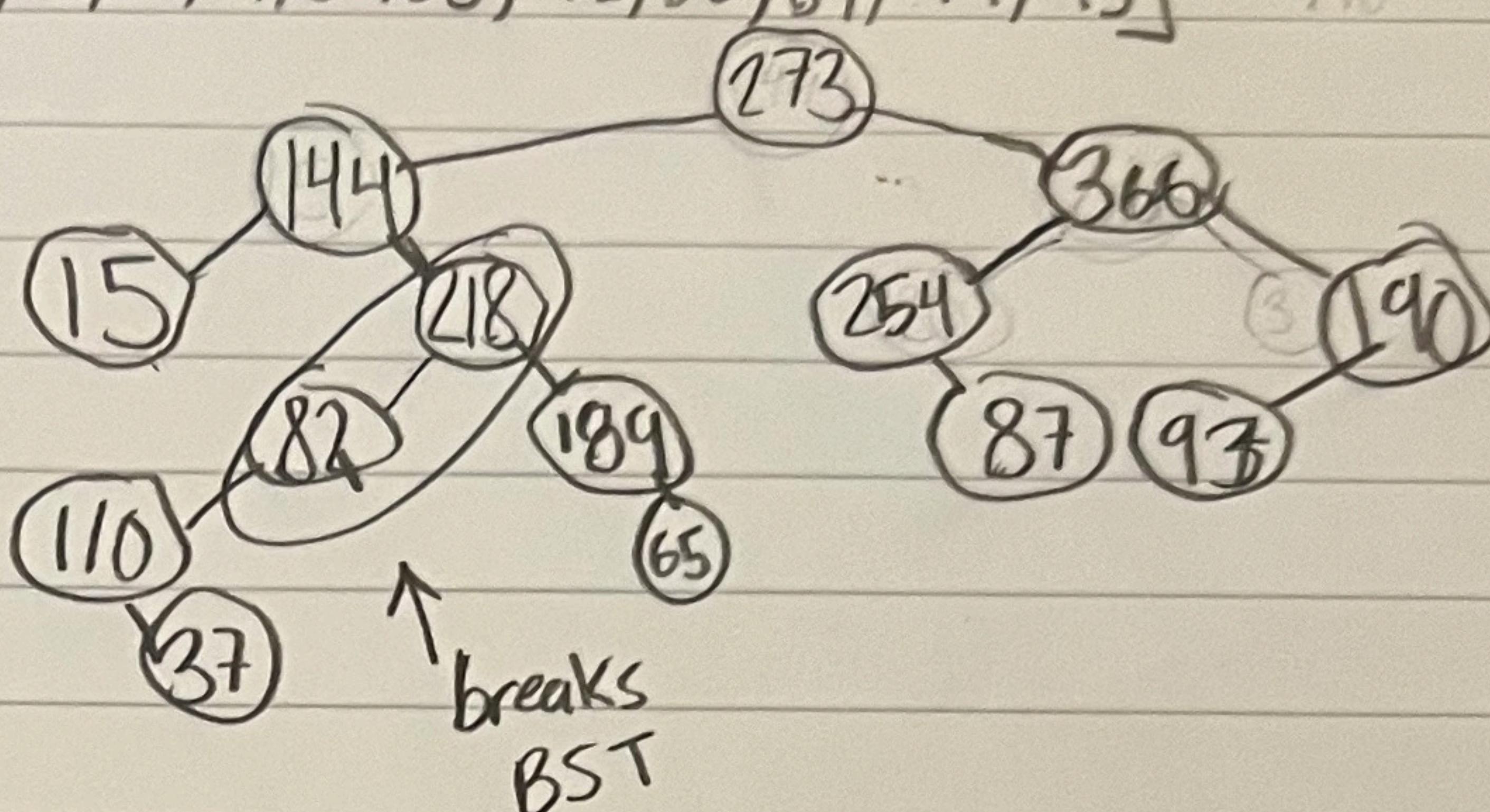
$$80 = 80 + 0 + (87 \cdot 2) = 254$$

$$87 = 87 + 0 + (0 \cdot 2) = 87$$

$$97 = 97 + 93 + (0 \cdot 2) = 190$$

$$93 = 93 + 0 + (0 \cdot 2) = 93$$

[273, 144, 15, 218, 82, 110, 37, 189, 65, 366, 254, 87, 190, 93] Maintaining previous structure



Not a BST by maintaining old order

Not a AVL since its not a BST

New inorder: [15, 144, 110, 37, 82, 218, 189, 65, 273, 254, 87, 366, 93, 190]

$$15 = 15$$

$$144 = 144 + 15 + (110 \cdot 2) = 374$$

$$110 = 110 + 0 + 74 = 184$$

$$37 = 37$$

$$82 = 82 + 184 = 266$$

$$218 = 218 + 266 + 378 = 862$$

$$189 = 189 + 130 = 319$$

$$65 = 65$$

$$273 = 273 + 374 + 732 = 1384$$

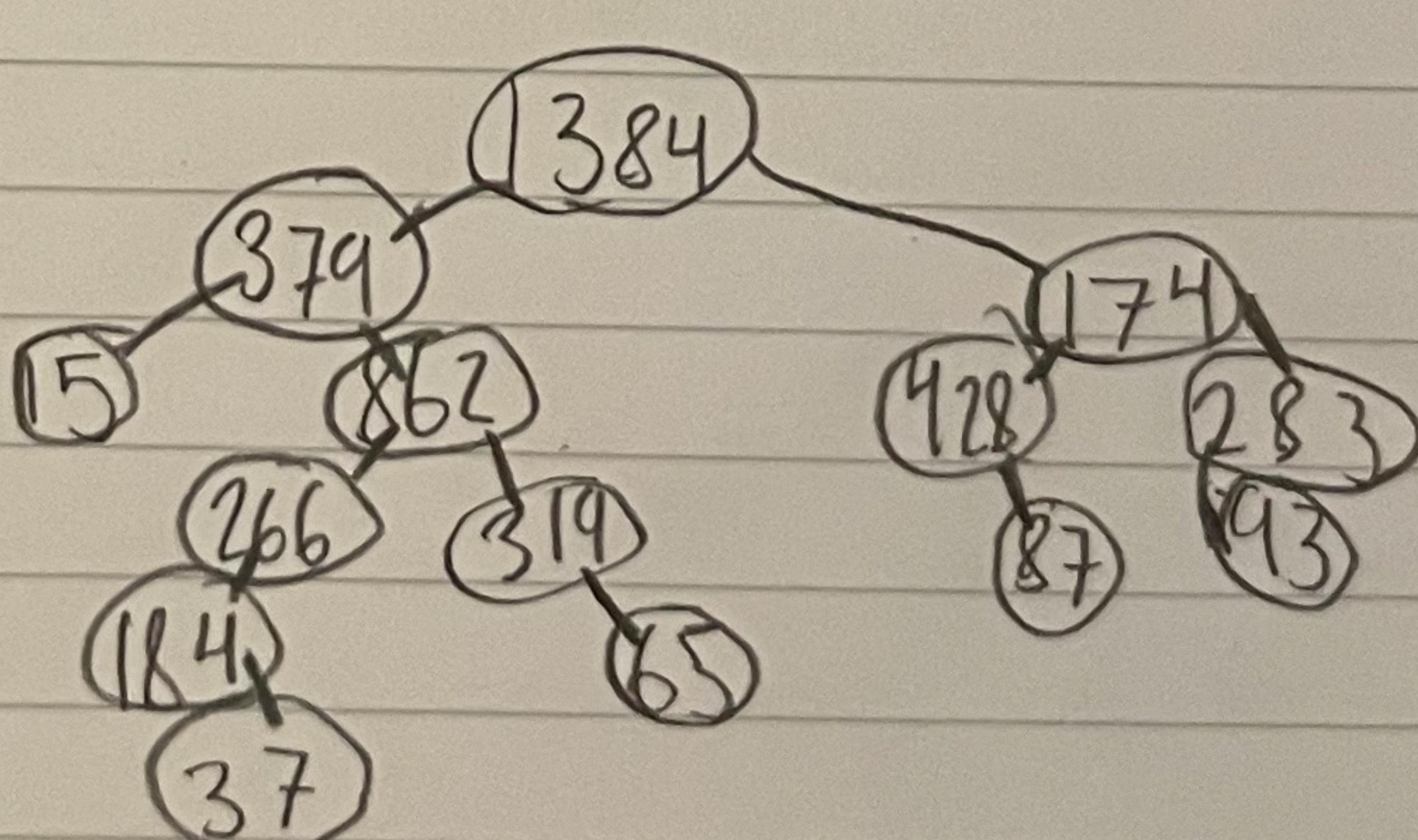
$$254 = 254 + 174 = 428$$

$$87 = 87$$

$$366 = 366 + 428 + 380 = 1174$$

$$93 = 93$$

$$190 = 190 + 98 = 283$$



b) This is not BST since it violates BST property

c) Not a AVL since its not a BST