Data Structures Chpt 6 Noah Weiner

6.2 a)

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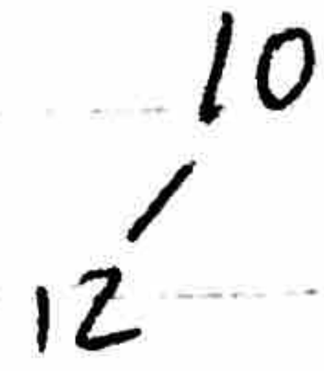
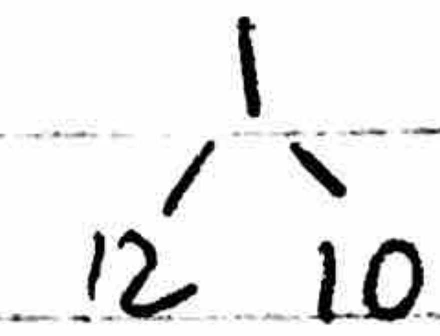
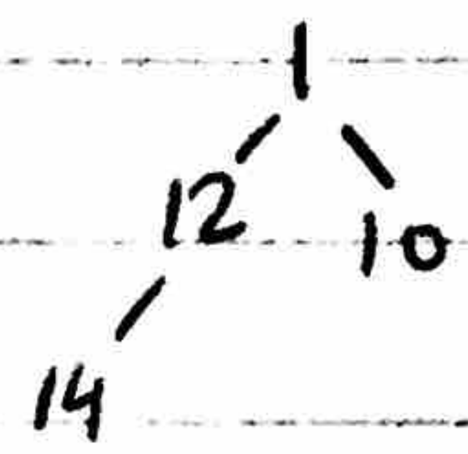
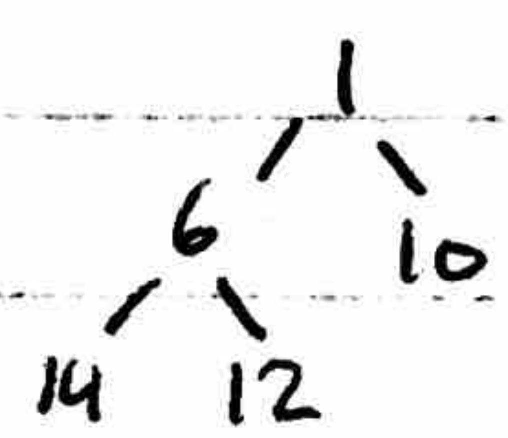
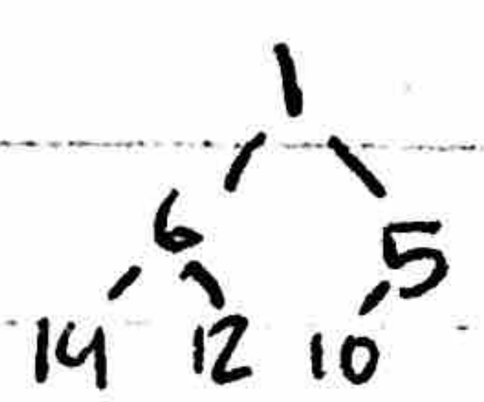
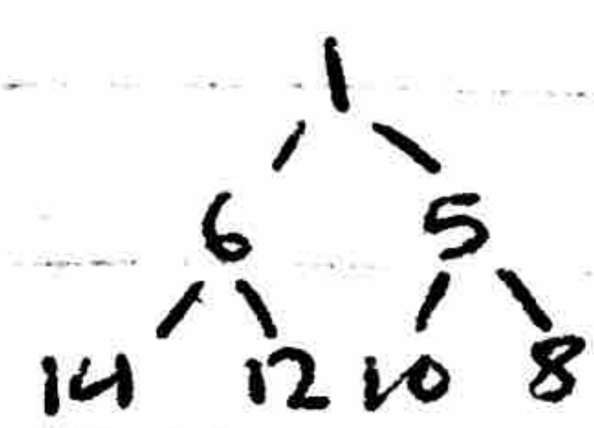
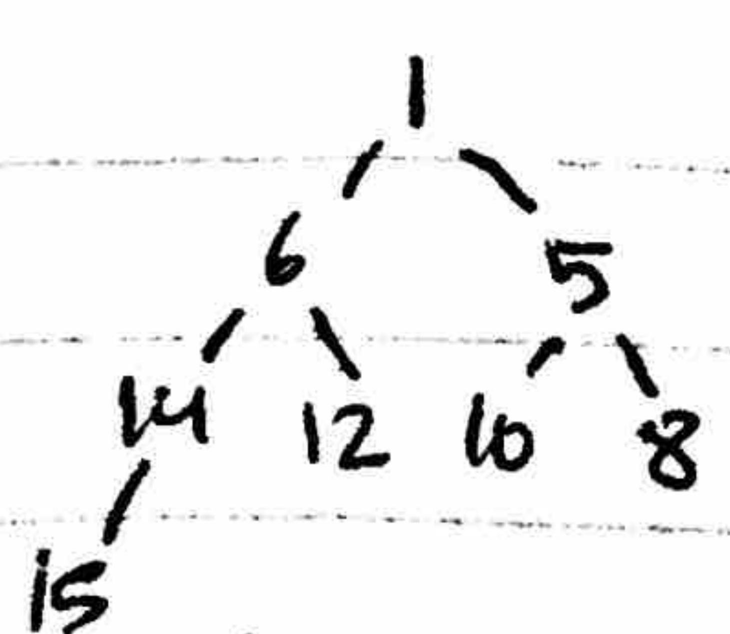
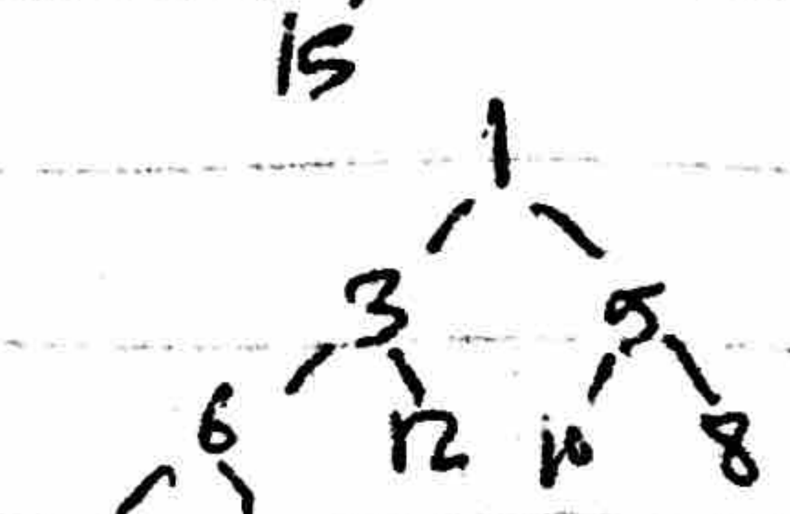
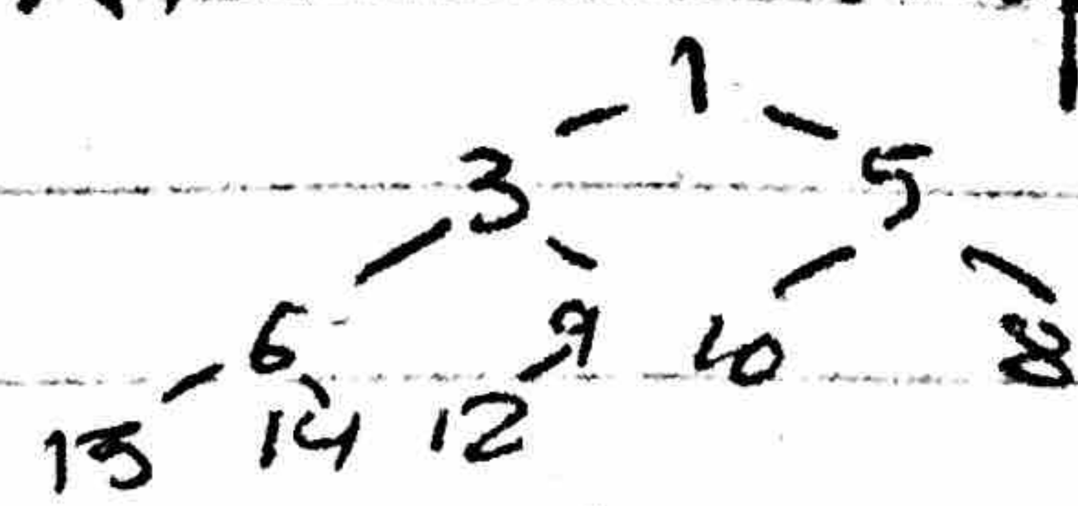
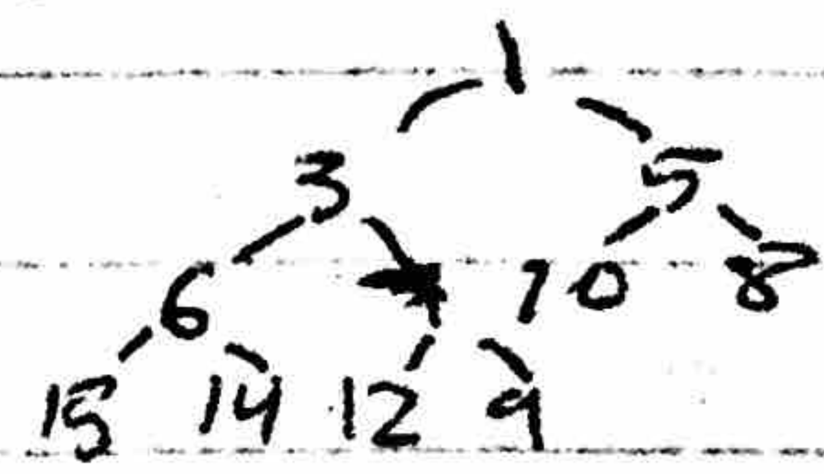
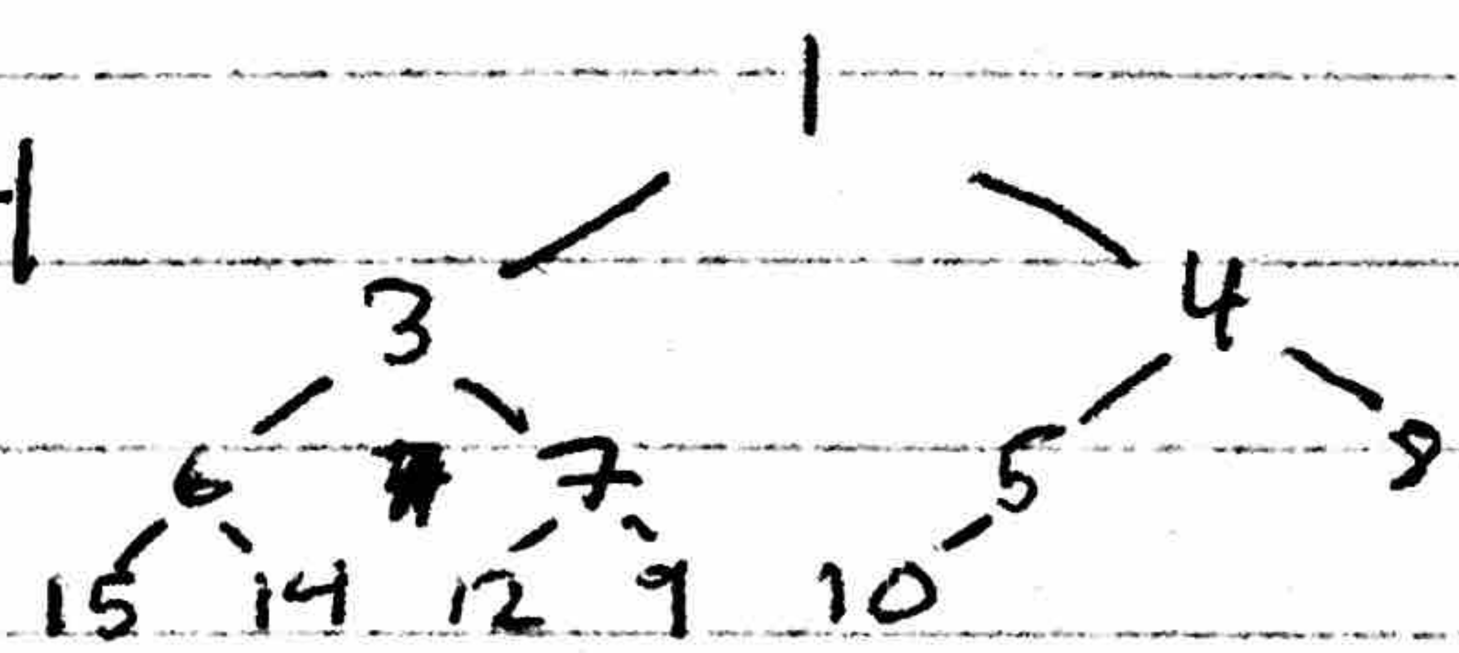
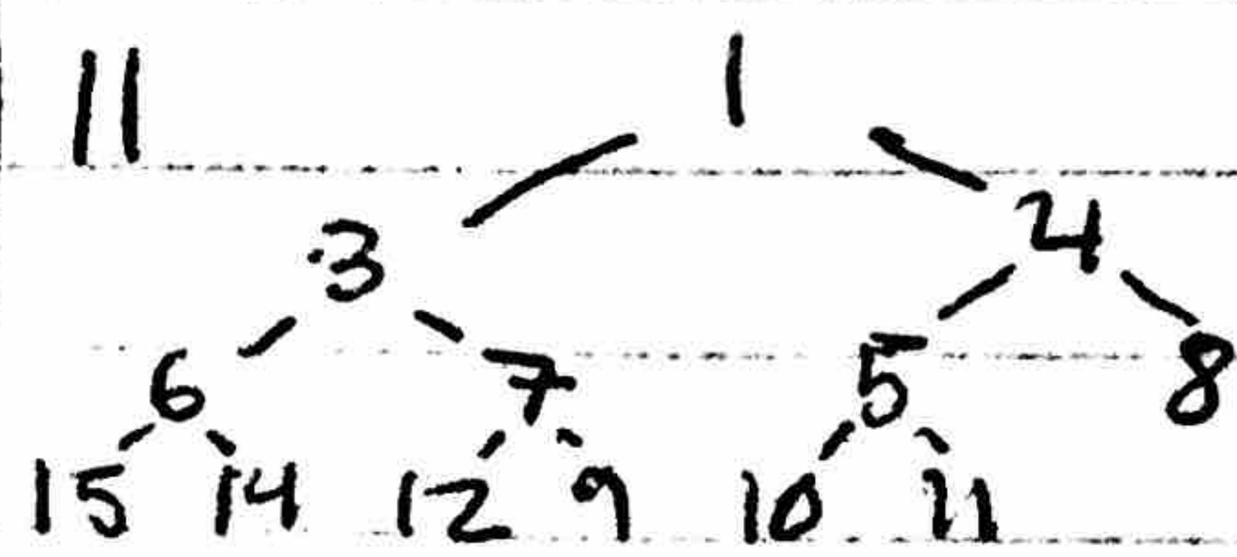
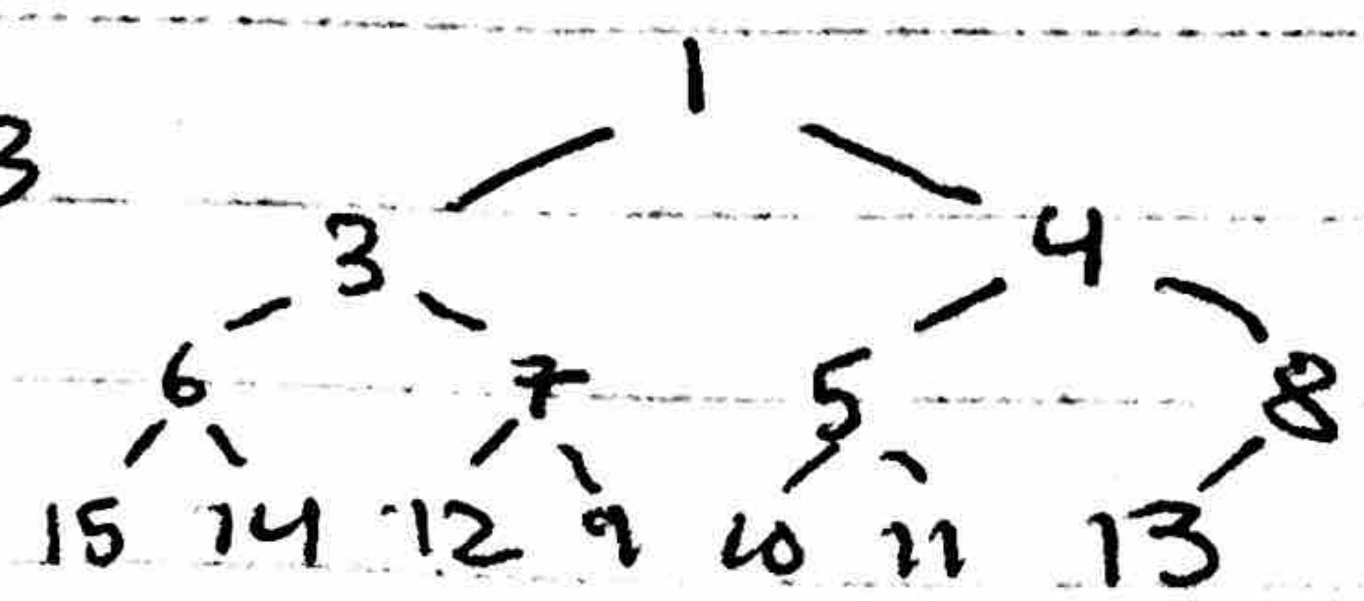
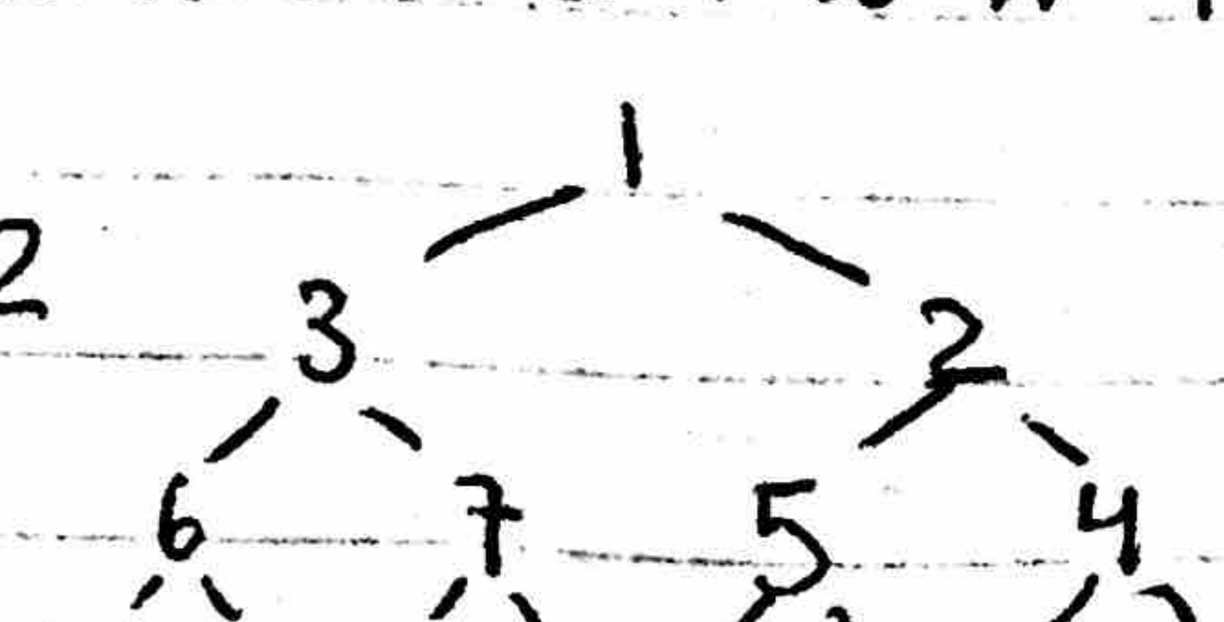
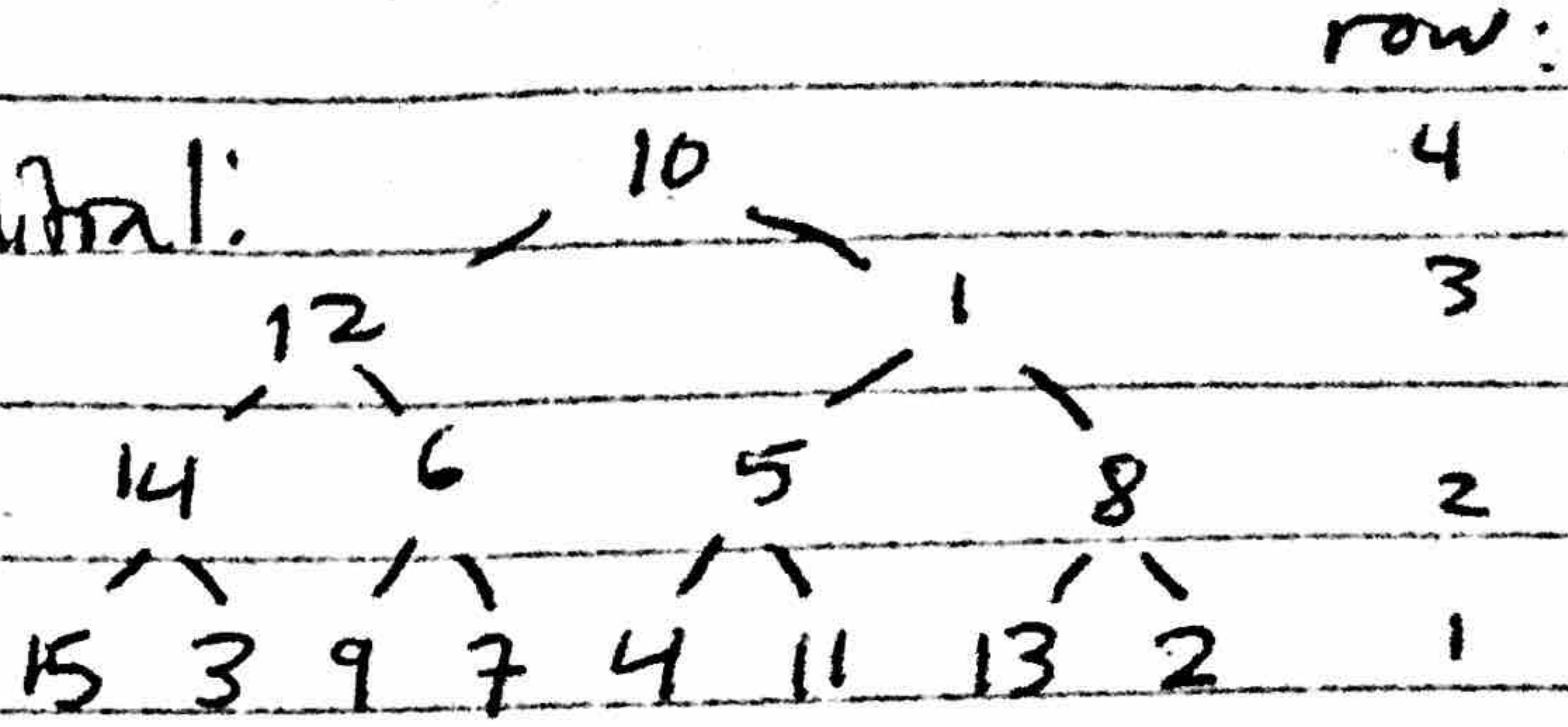
12	
1	
14	
6	
5	
8	
15	
3	
9	
7	
4	
11	
13	
2	

6.2 b) Initial:



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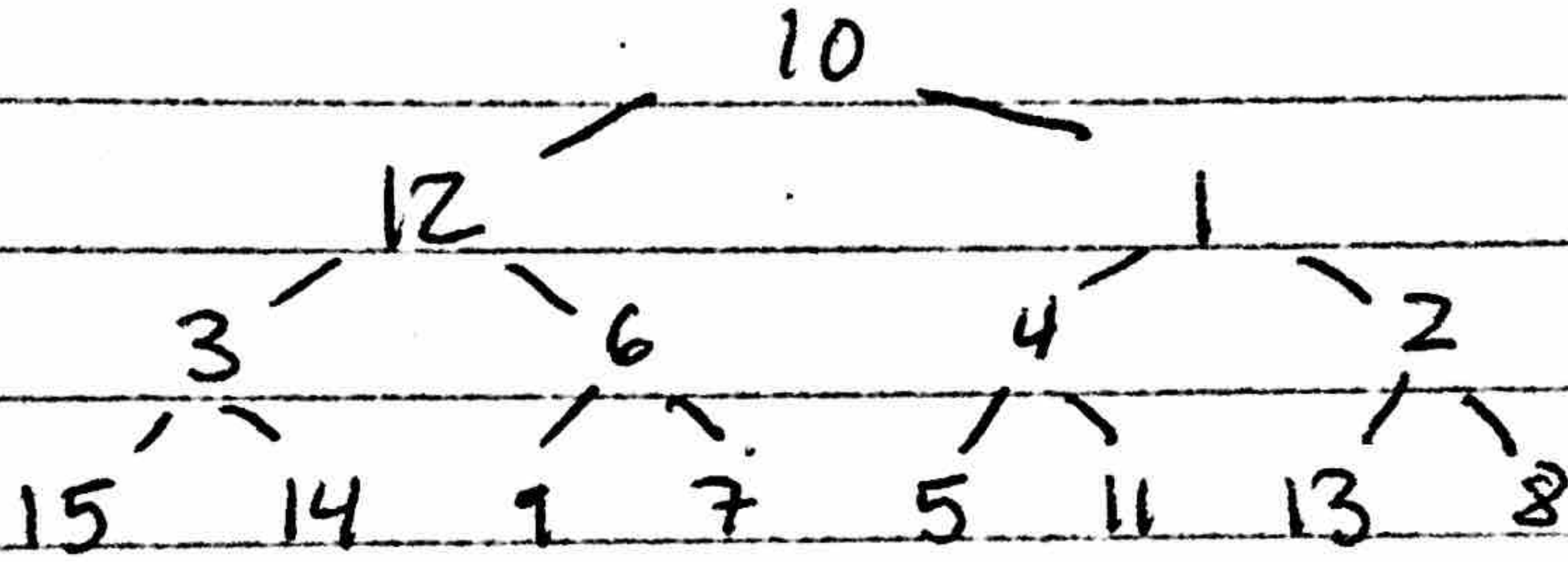

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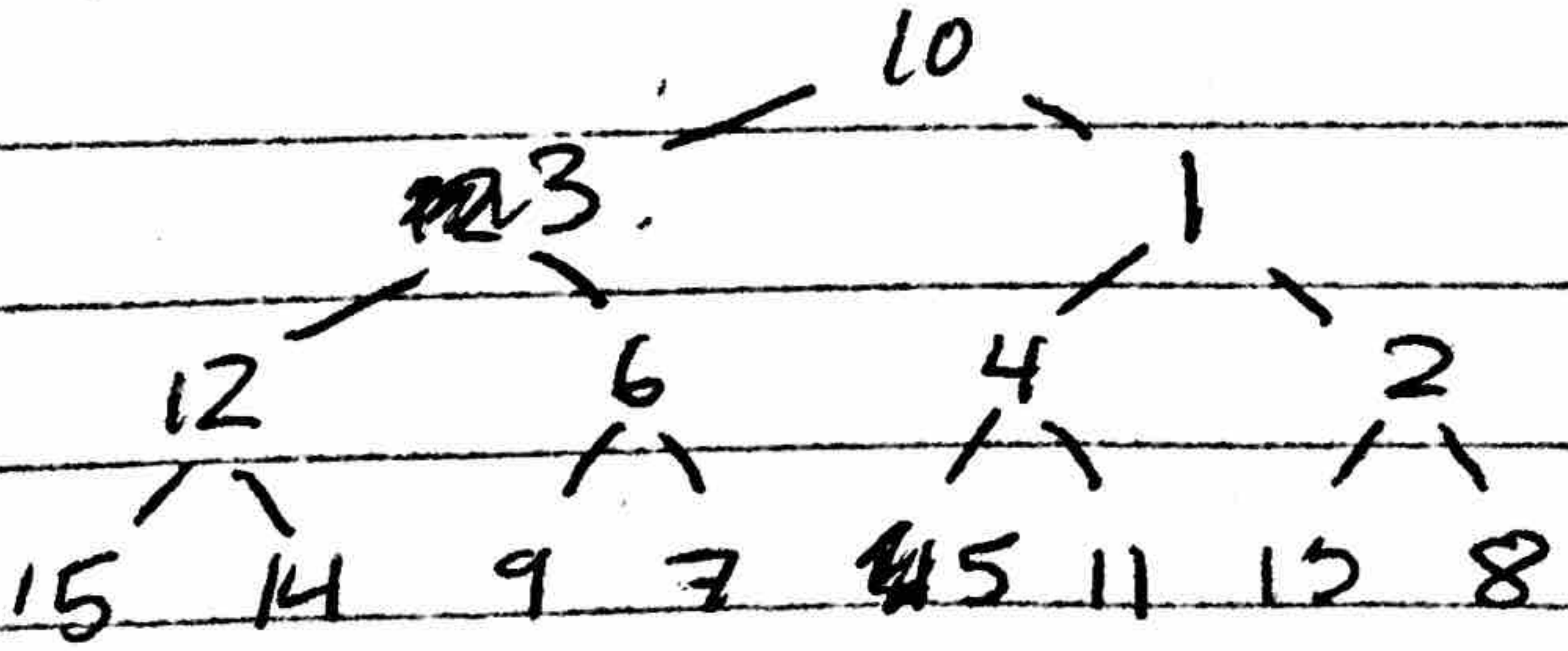

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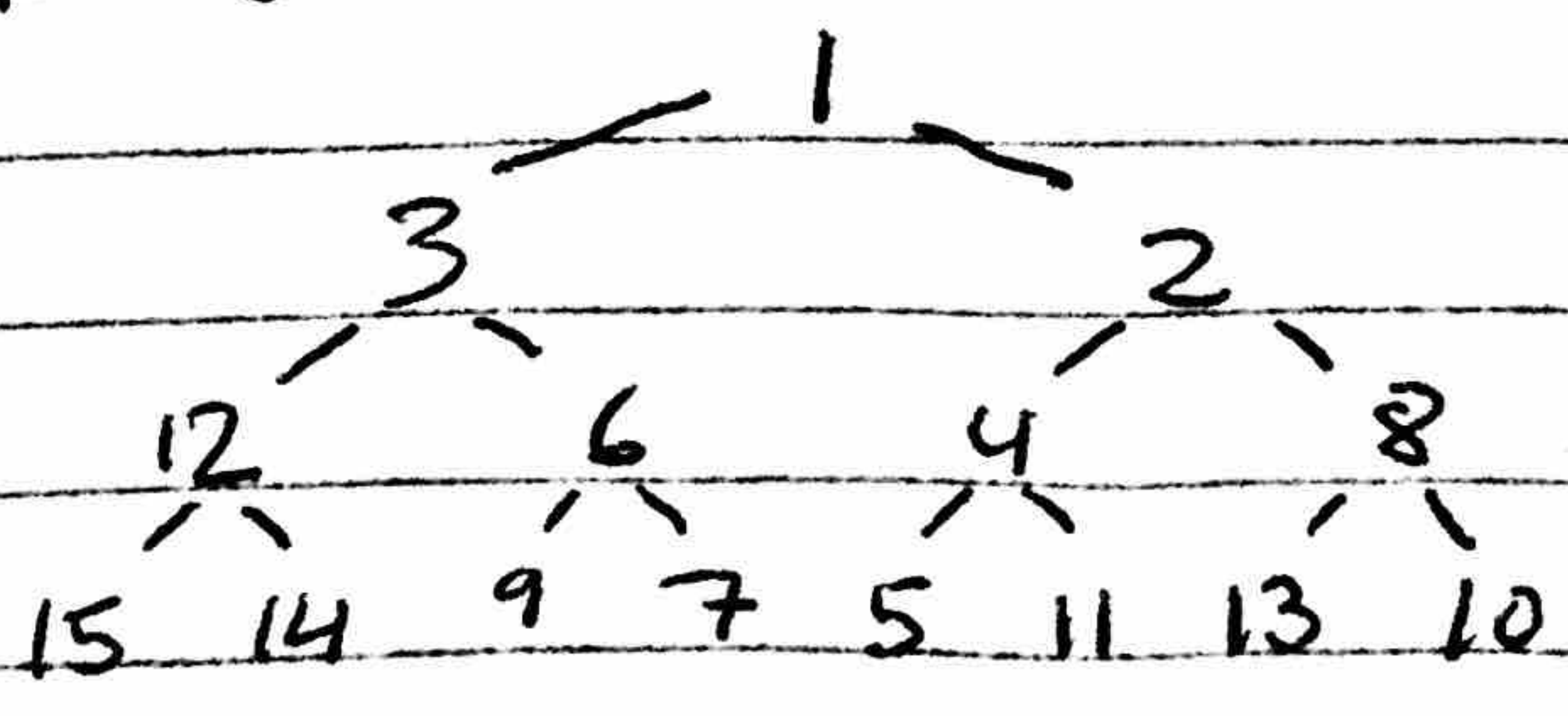
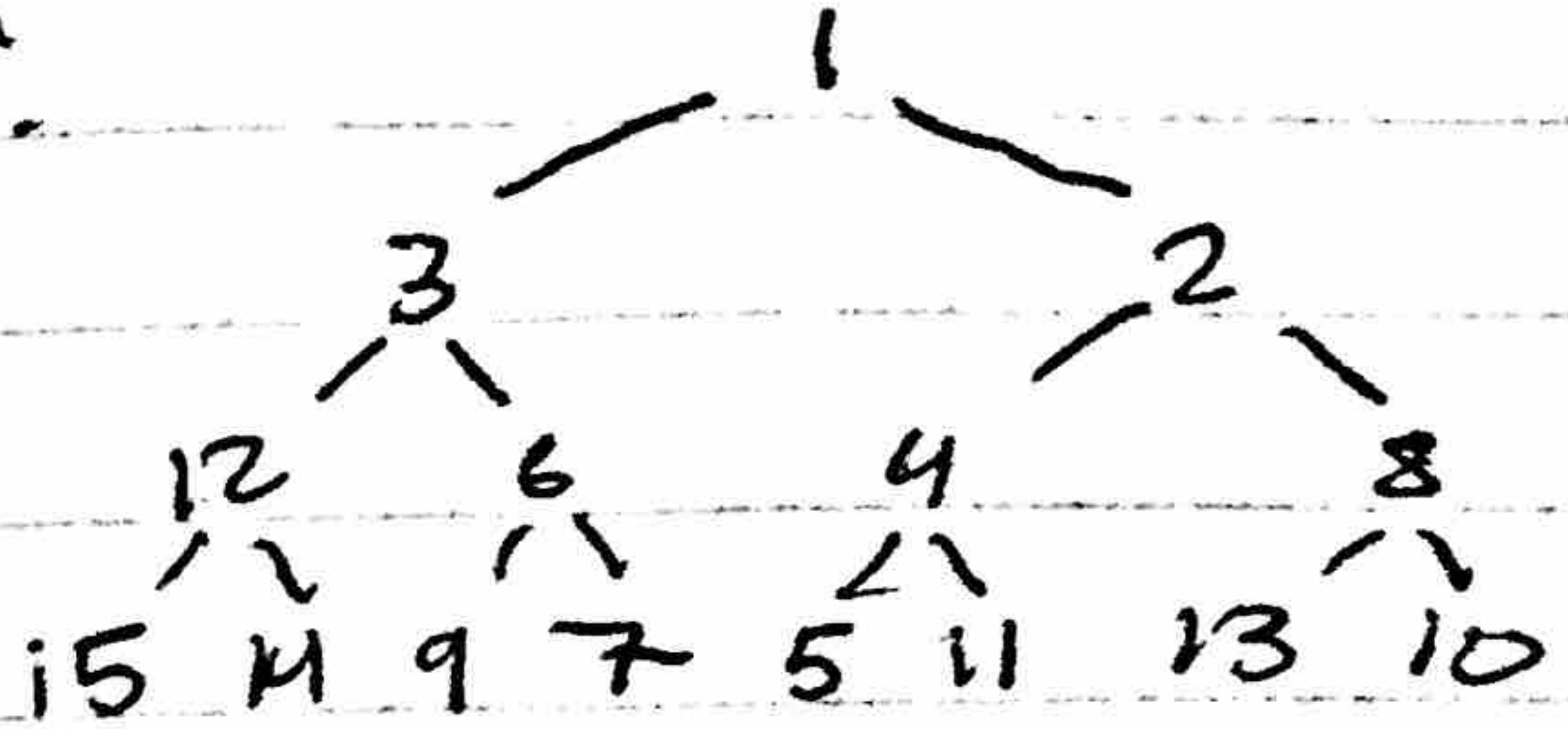


6.3

Initial:



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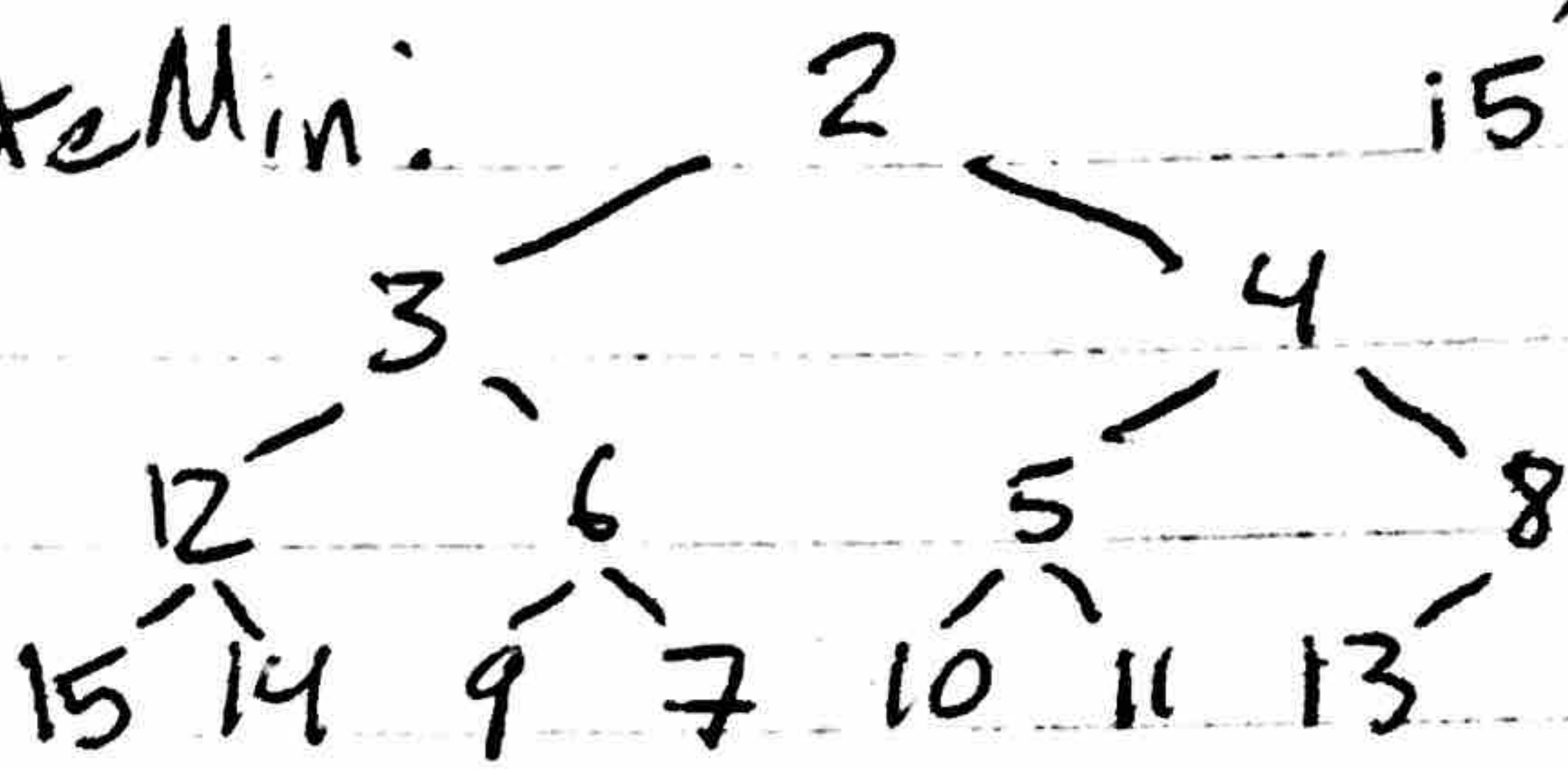

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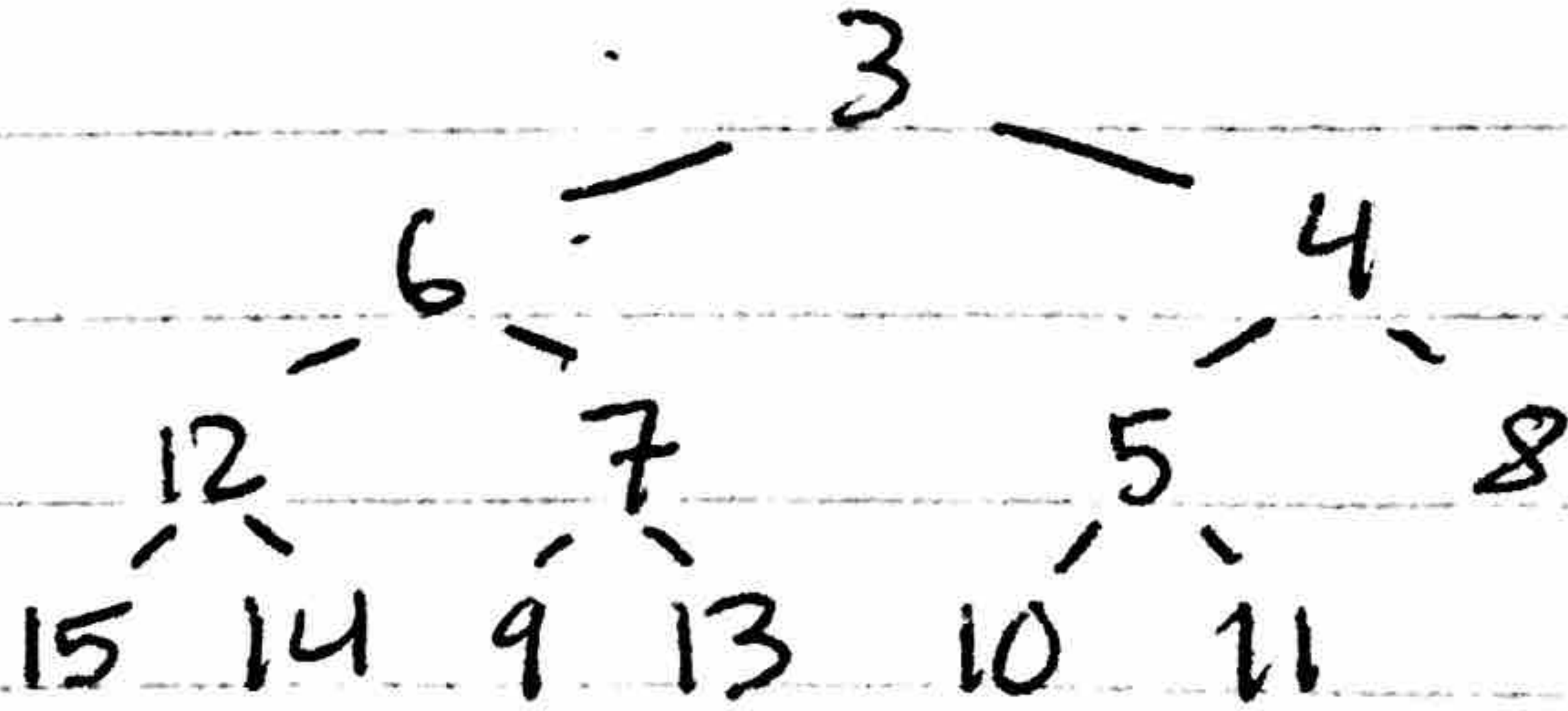

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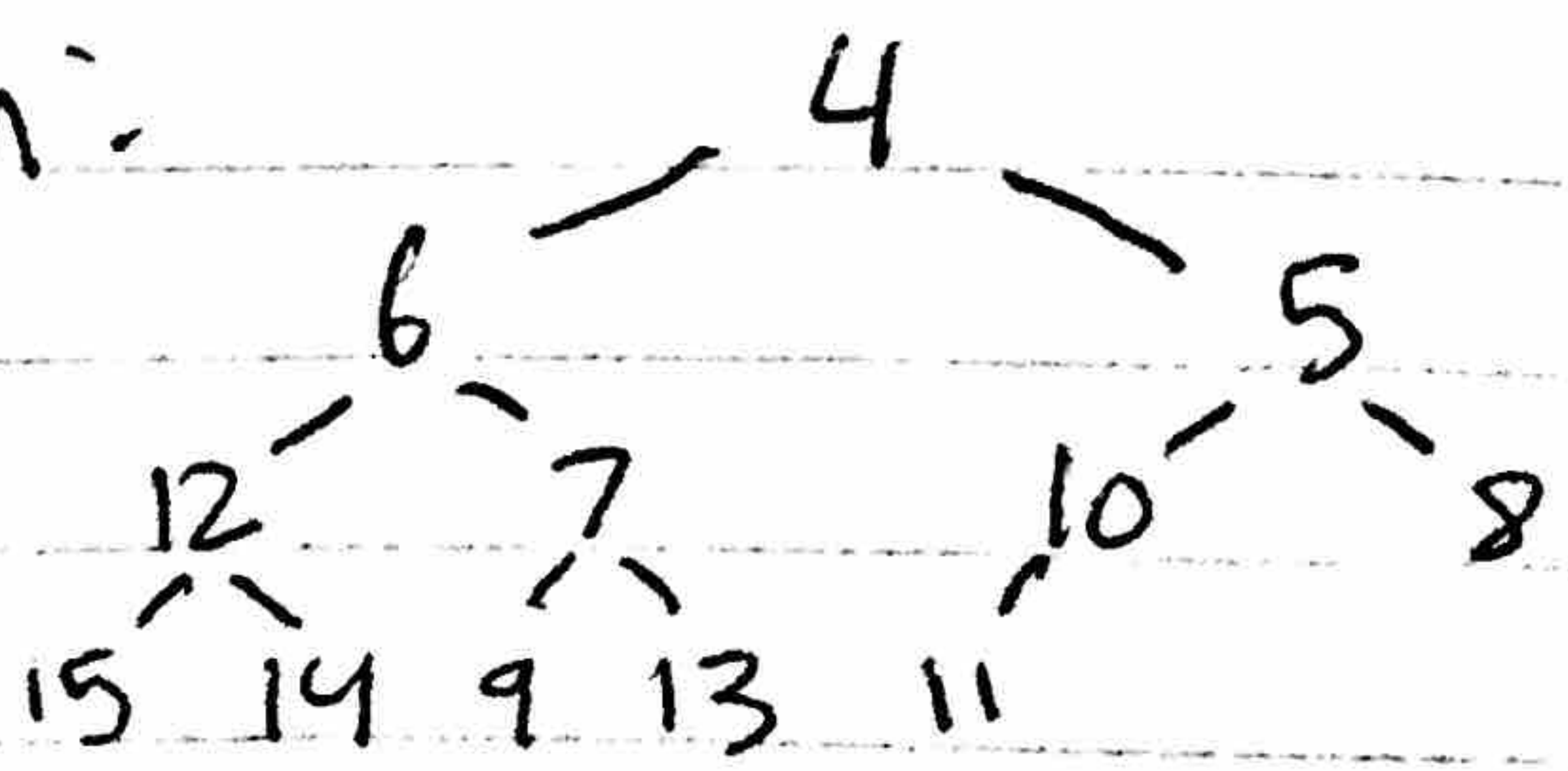
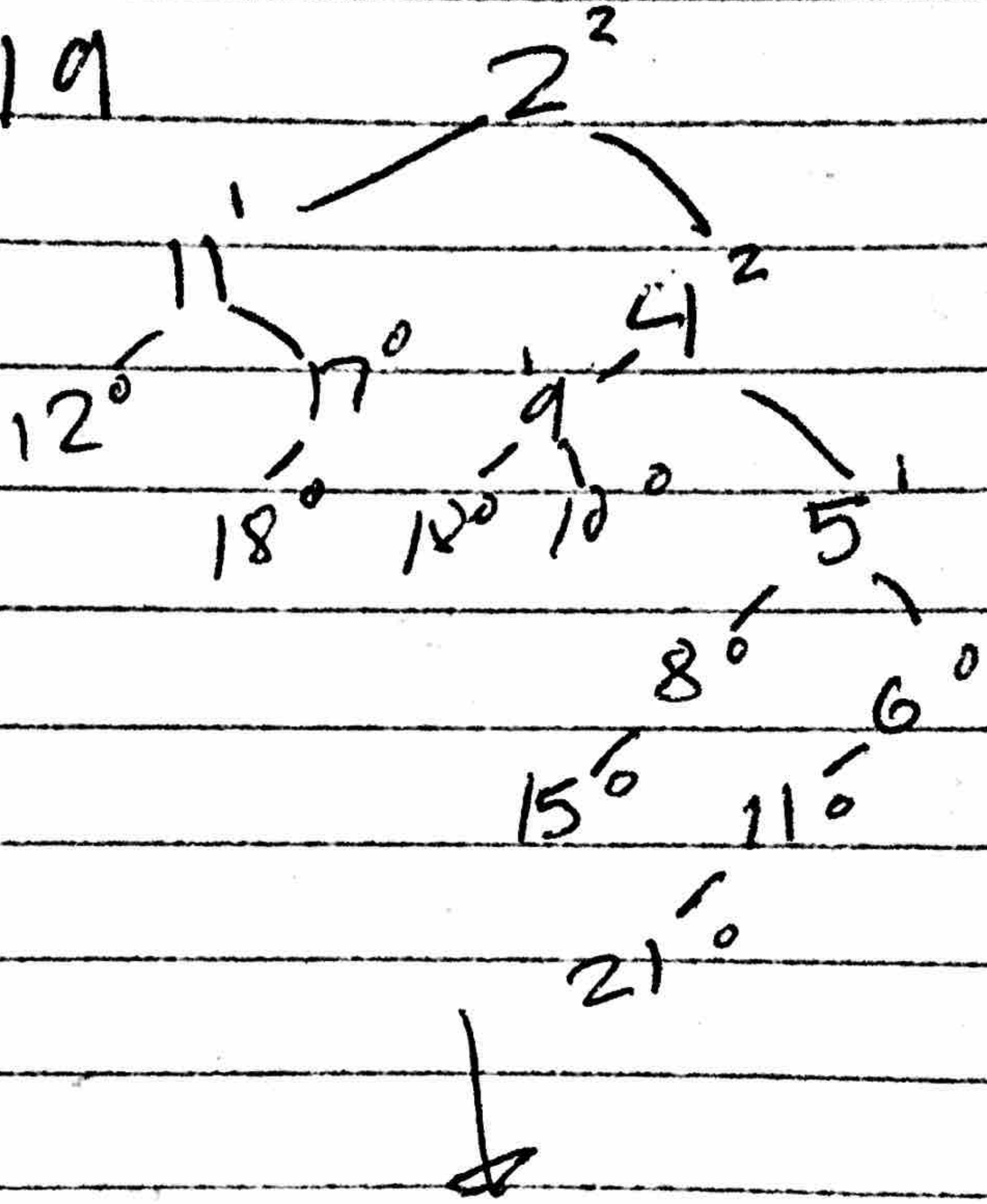
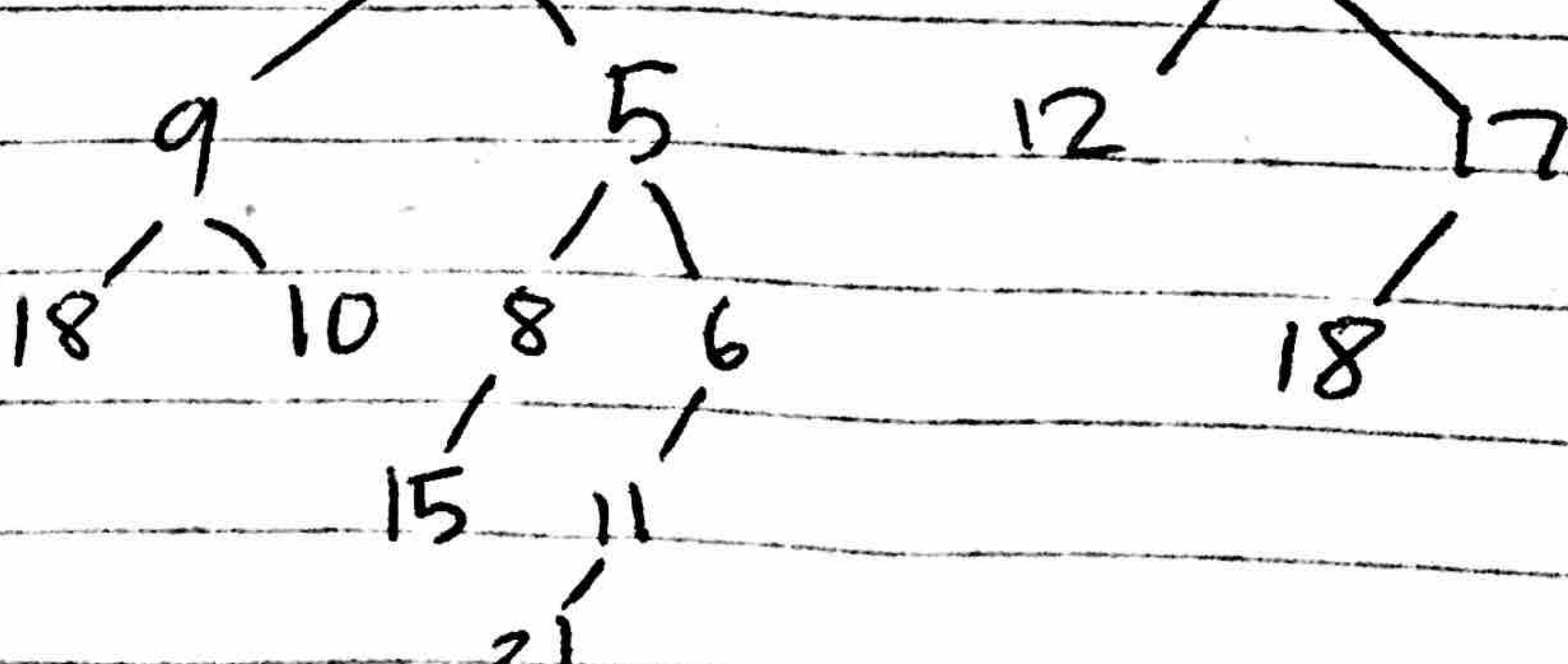


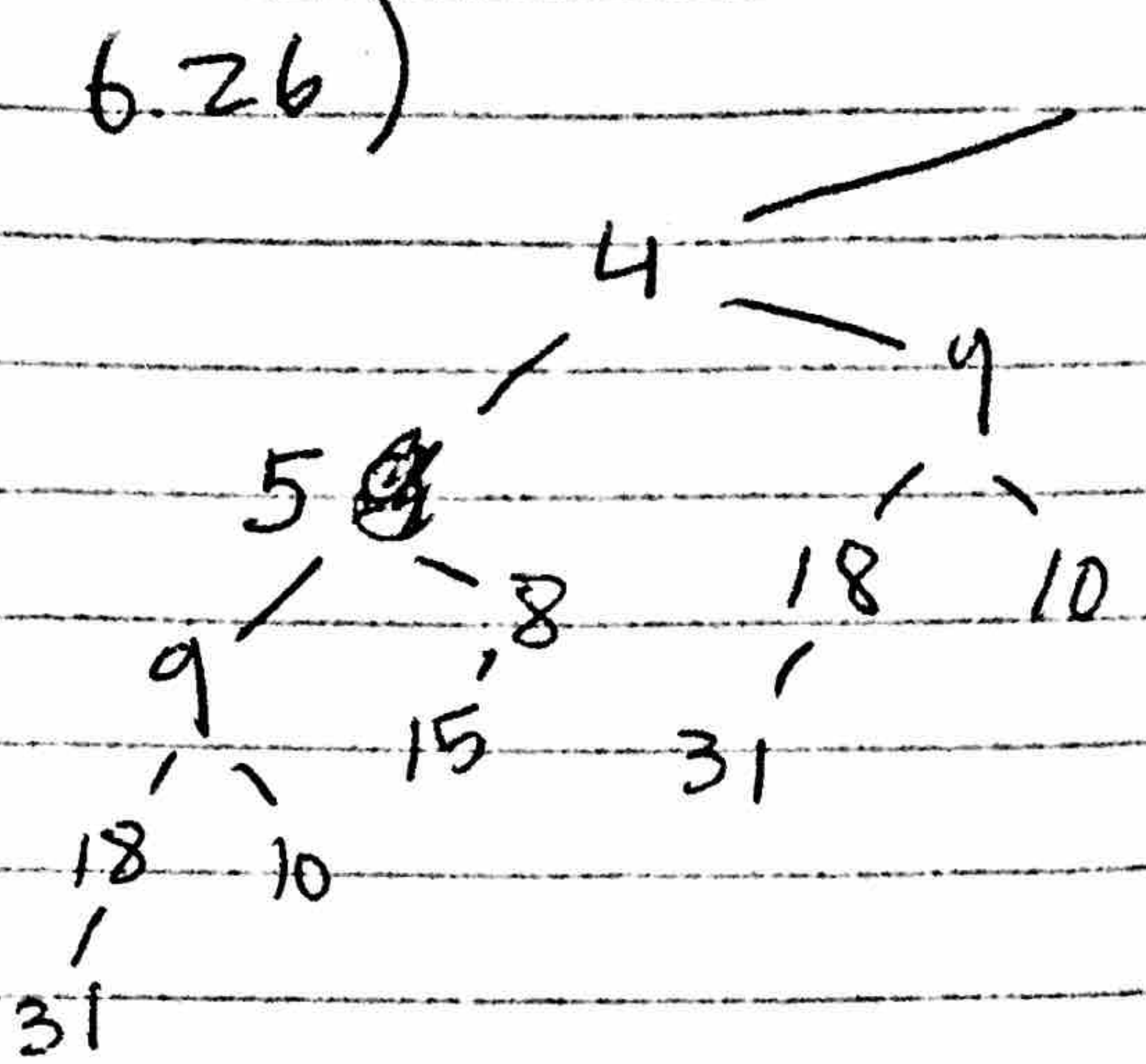
6.19





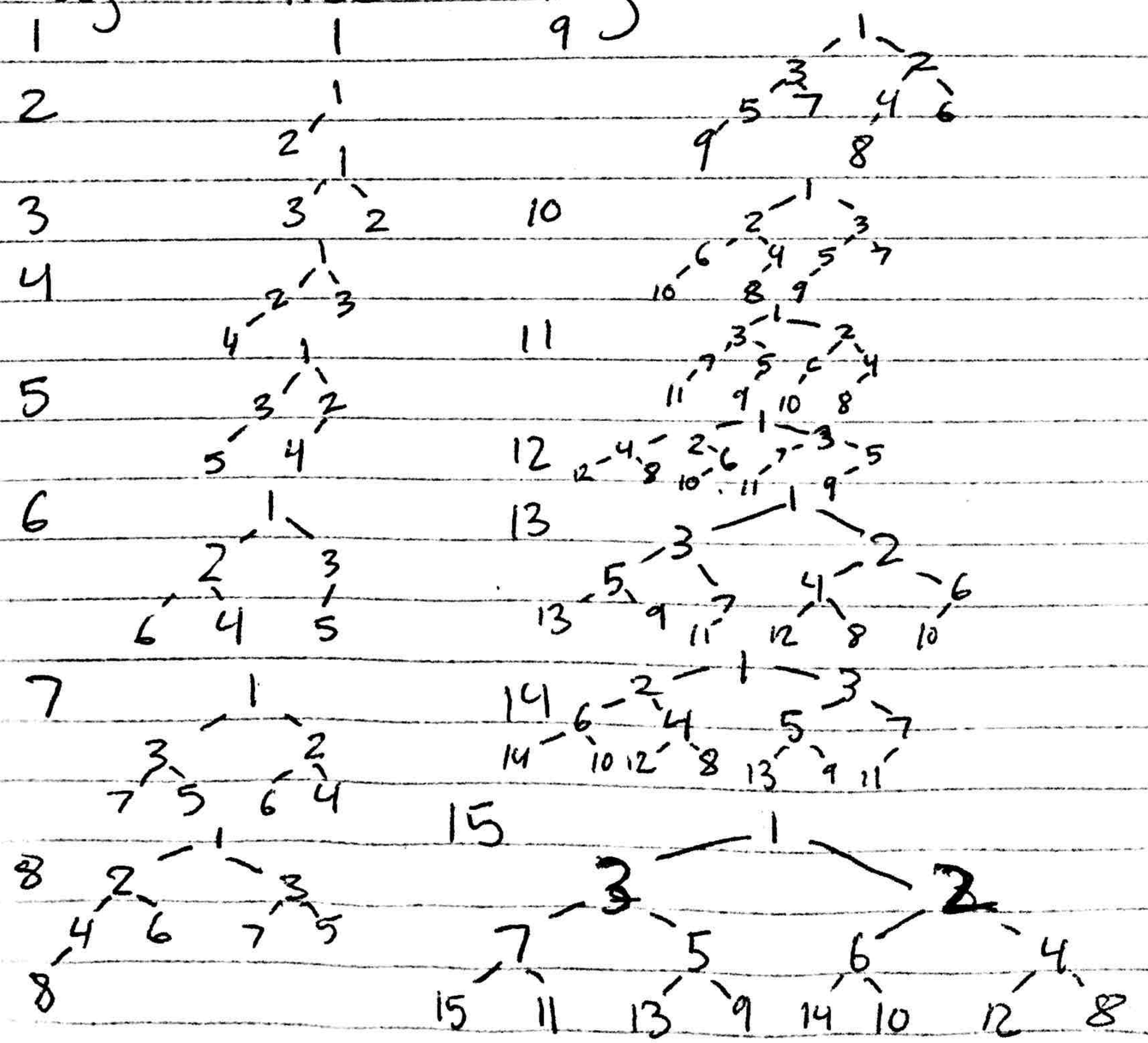
6.20

6.26)



6.27)

key tree key tree



6.31 If a binomial tree of height k consists of two trees of height $k-1$, and one of those trees is the child of the other's root, the the number of nodes at given depth d is:

$$(k-1)_d + (k-1)_{d-1} = k_d$$

where k_d is the number of nodes in a tree of height k at depth d, where $1 \le d \le k-1$, and base cases:

$$k_0 = k_k = 1$$

The recursive definition of the binomial coefficient is:

$$\binom{x}{y} = \binom{x-1}{y-1} + \binom{x-1}{y}$$

and the above relationship satisfies that definition.

6.32