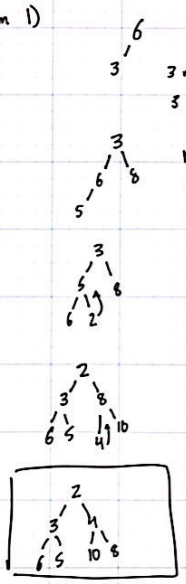
6, 3, 8, 5, 2, 10, 4

Problem 1)



Start with 6
Insert 3

3 needs to become the root

5 percolates up

Insert 8 as right hand child

Insert 5 to left child of 6

5 will need to percolate up

insert 2, 2 needs to become the root and percolate up.

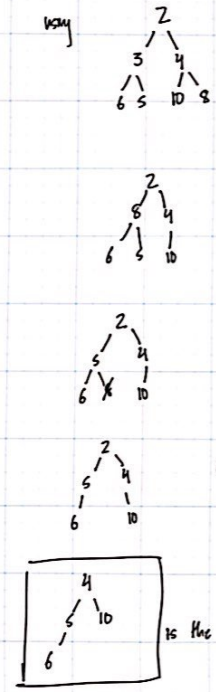
Insert 10

Insert 4

4 must percolate up and swaps with 8.

final min heap

problem 2) delete 3 numbers from the min heap, show how it changes the tree and final location



easy

Lets delete 3, 6, and 2

deleting 3 first

8 would take over as the parent since it's the rightmost node

Then 5 will have to percolate up

delete 8 then

Okay for now, then delete 2

is the final tree

problem 3) apply the heapify algorithm to an array holding

6 3 8 5 2 10 4 into a binary min heap