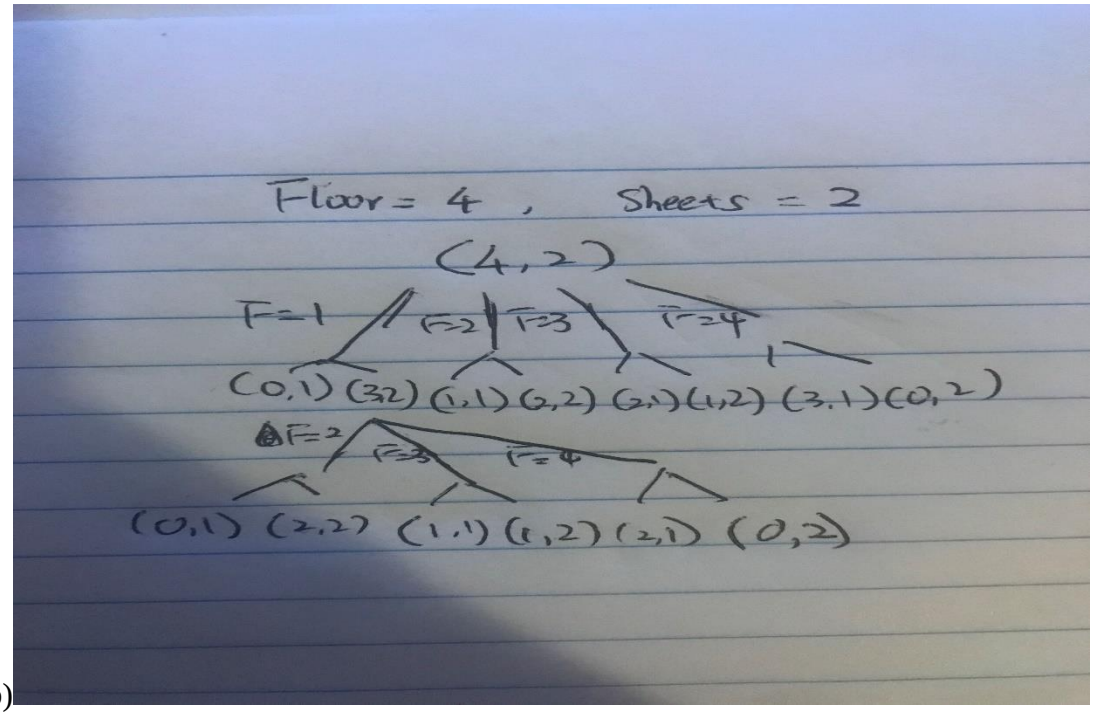
1(a) if we only have 1 glass sheet, we can only start at bottom and increment it to the floor that glass sheet would break.

(more than 1 glass sheet) If we start at floor i, there are two cases in this substructure:

Case1: the glass sheet would shatter, try rest of floors that's below ith floor

Case2: the glass sheet survives from this trial, try floors above ith floor

The recursion can only continue when the number of glass sheets are more than 1, otherwise it would return the remaining floor (from bottom to the floor that glass sheets shattered. Worst case)

(b) 

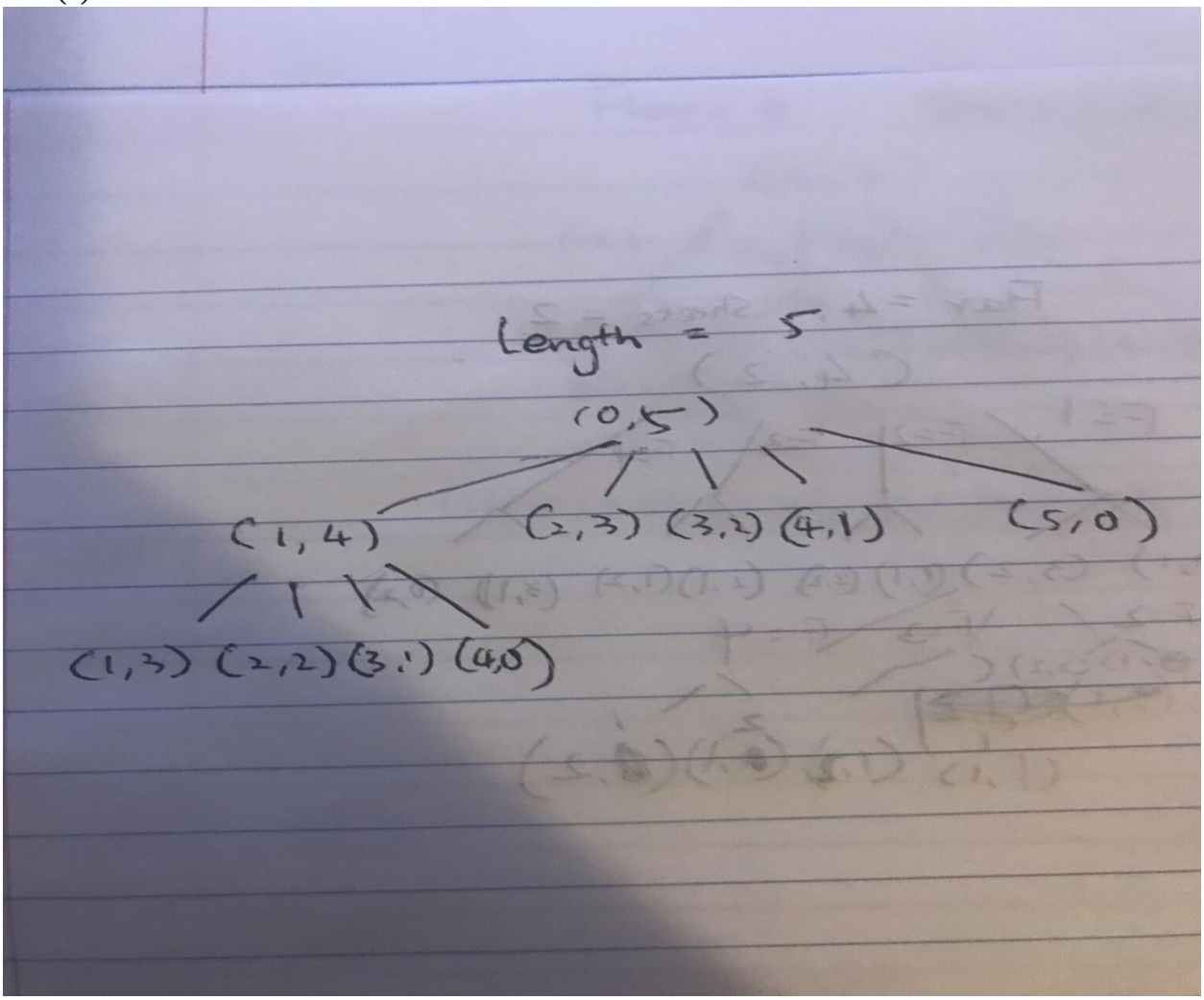
The maximum height is 4

(d) 32

(e) should be upper bound (worst case) m*n^2

(each sheet can have one try from bottom to highest) (we can start at any floor, so n possible ways)

2. (a)



(b) Counter Example:

Assume the length of rod = 5;

The prices are shown below:

2	5	8	9	8

By greedy algorithm, it will first cut the rod with length 4 which has highest price in all sizes. However, the maximum sale is the combination of length 3 and length 2(5+8 = 13 to 9+2 = 11). So the greedy algorithm not satisfy in this case.