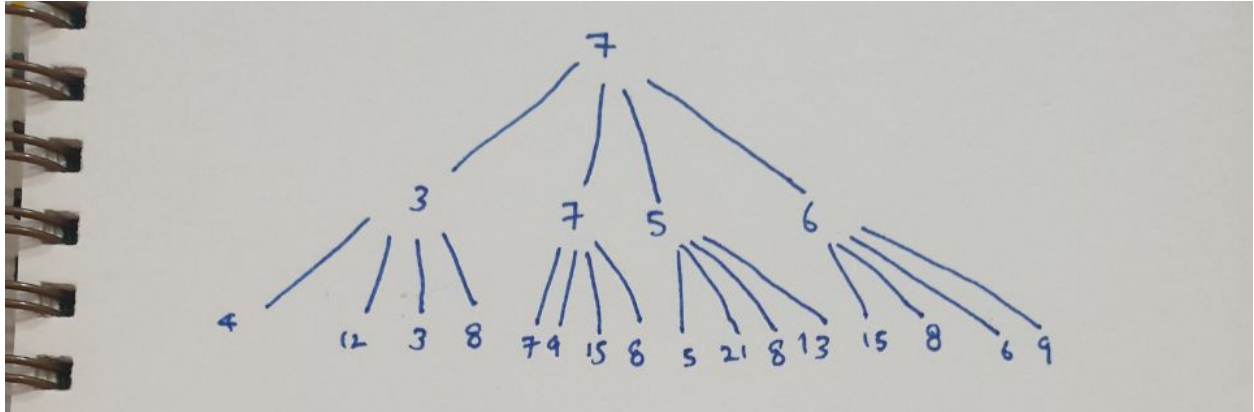


Theory Questions

Question 1

a)



b)

Blue tries to maximise its given values whilst orange tries to minimise the values given to it. Hence at every stage, if it is blue's turn, it will choose the largest possible value, while if it is orange's turn, it will choose the smallest possible value

c) action c1 will be chosen

Question 2: A - B pruning

a) Actions Pruned = [d2, d3, d4, e4]

b) After evaluating all the actions in b, 3 will be chosen by the min player, and the Alpha value will be updated to 3.

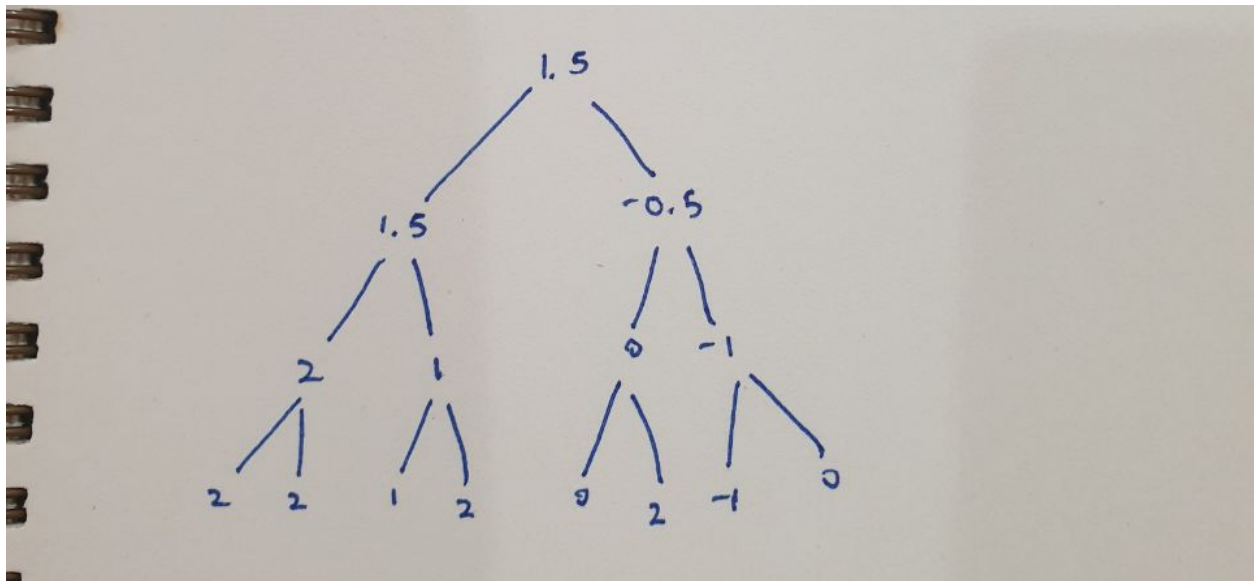
After evaluating all the actions in c, 7 will be chosen by the min player, and the Alpha value will be updated to 7

After evaluating d1, the value that will be chosen after evaluating all the d branches will be $\leq d1 = 5$. Therefore, since the alpha value is $7 > 5$, d2, d3, and d4 will be pruned

After evaluating e1, e2, and e3, the value that will be chosen after evaluating all the e branches will be $\leq e3 = 6$. Therefore, since the alpha value $7 > 6$, e4 will be pruned

Question 3 - Expecti-minimax

a)



b) a1 will be chosen