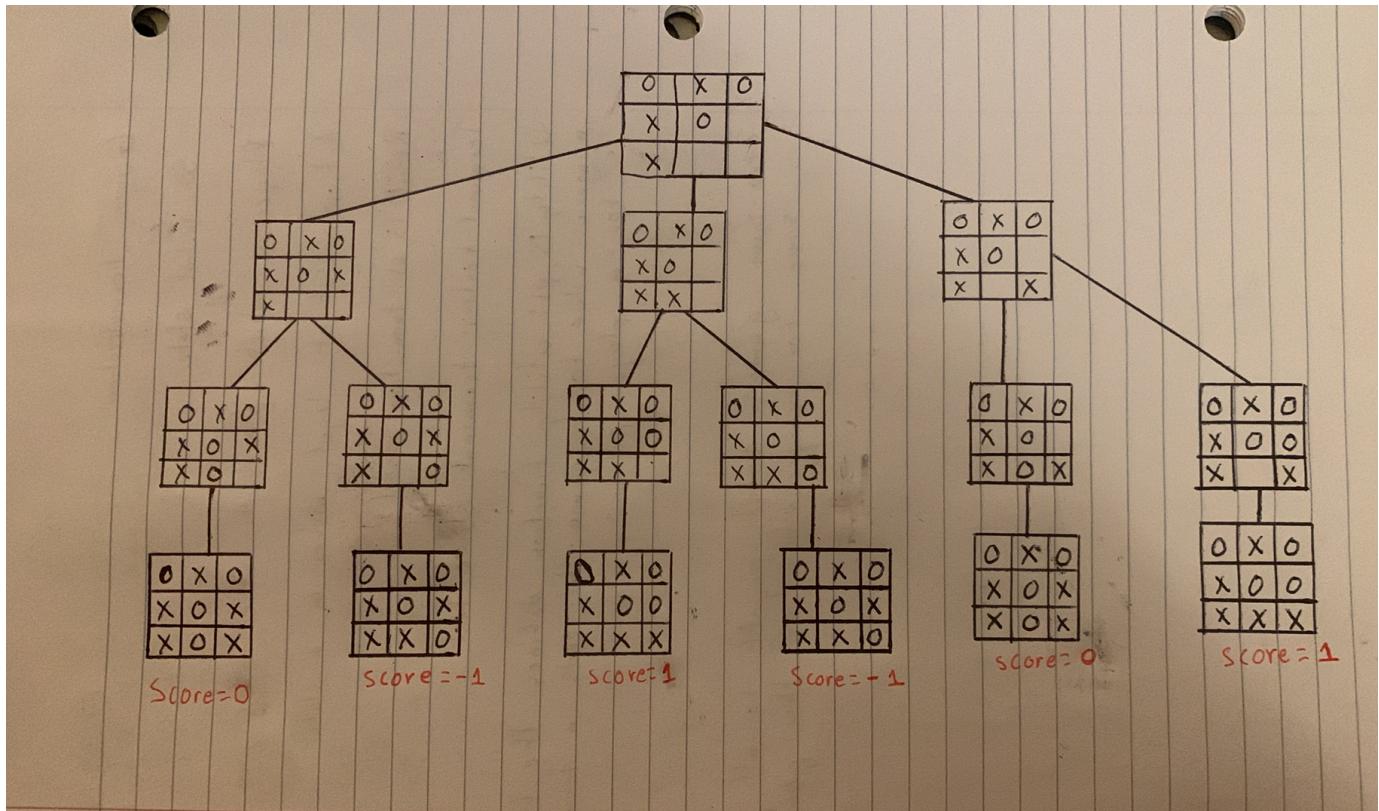
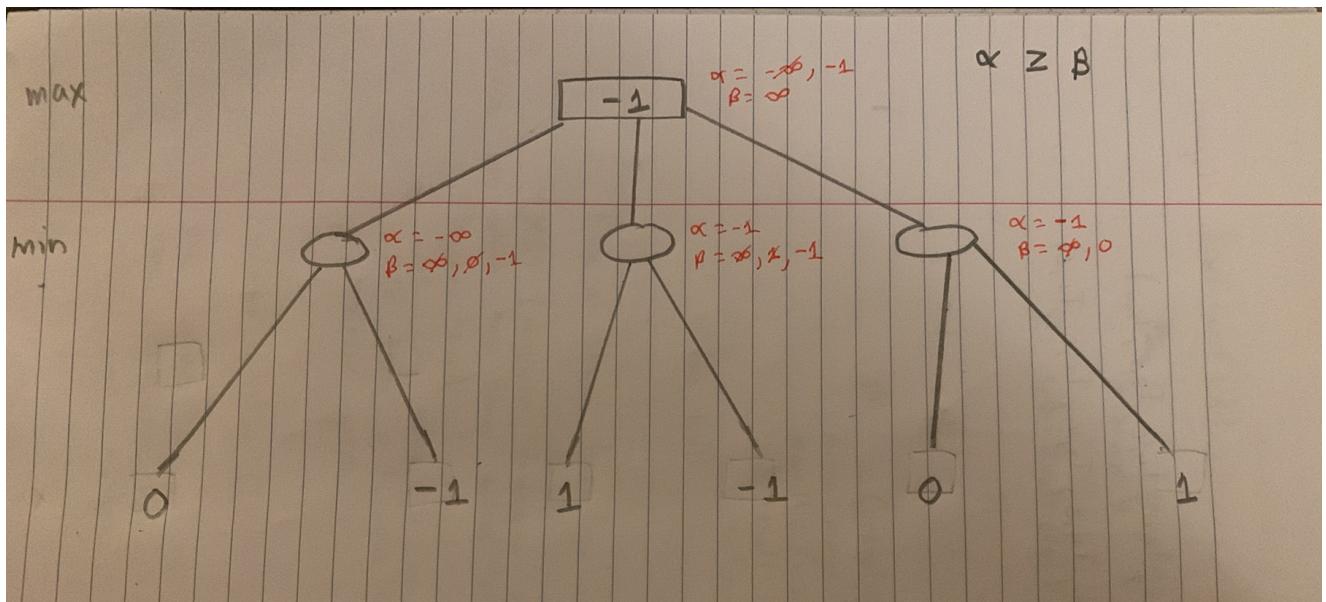


Q1

a)



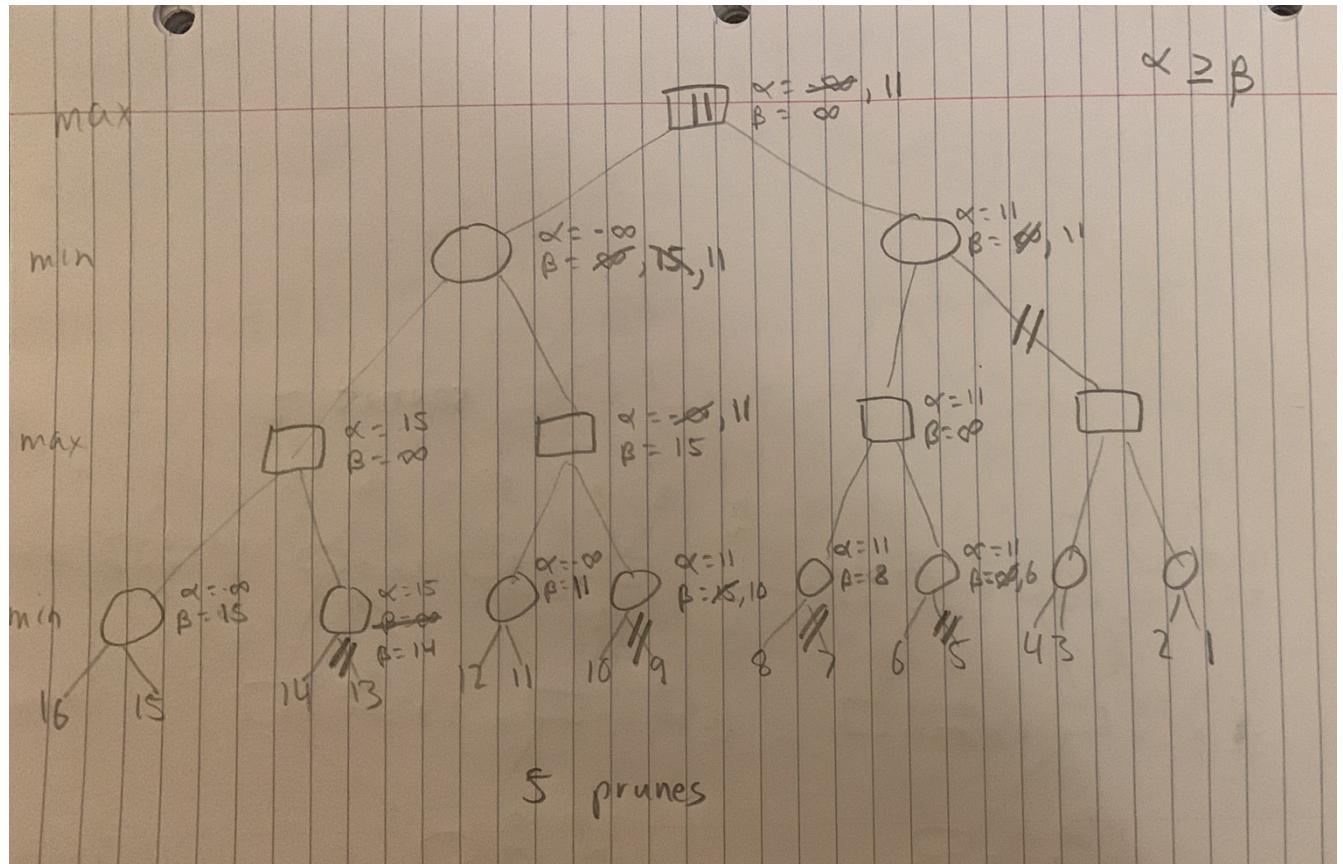
b)



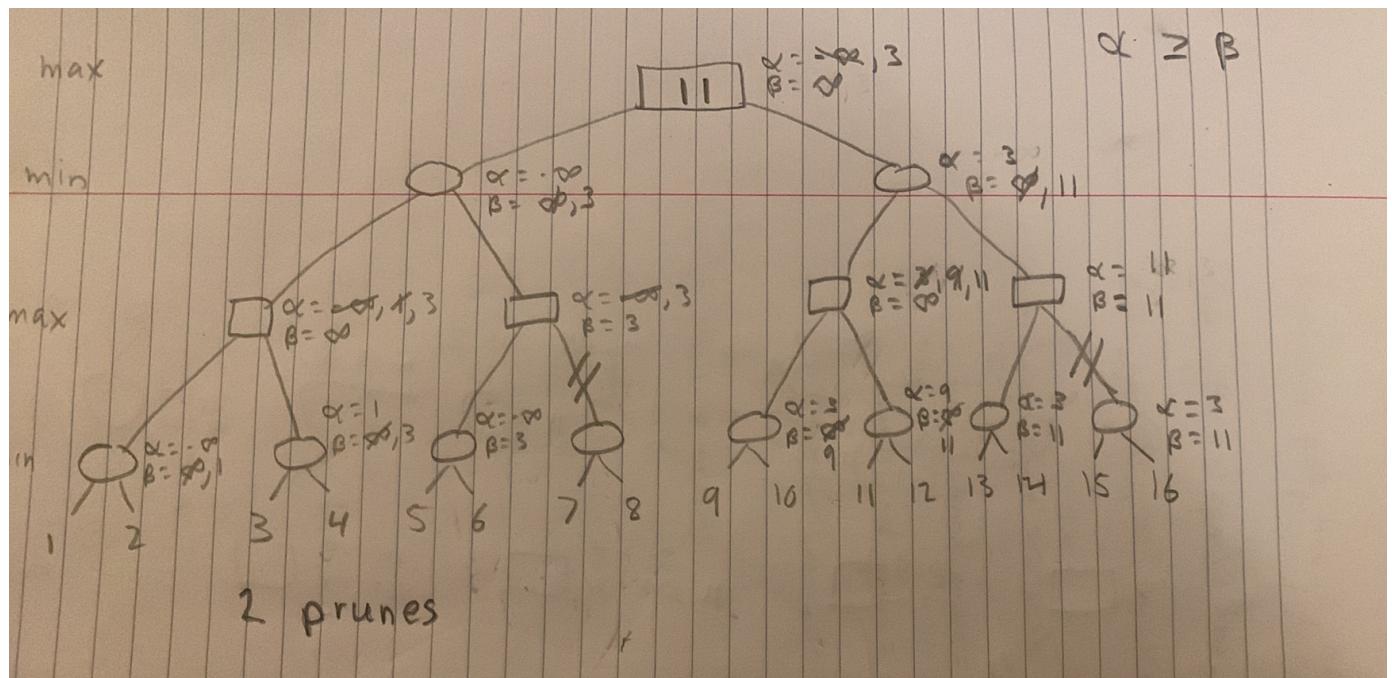
Note: Because of the order of the leaves, there is no pruning. If the game tree's branches were organized differently, pruning could occur. Ie, with the ordering of the leaves above, no pruning happens.

Q2

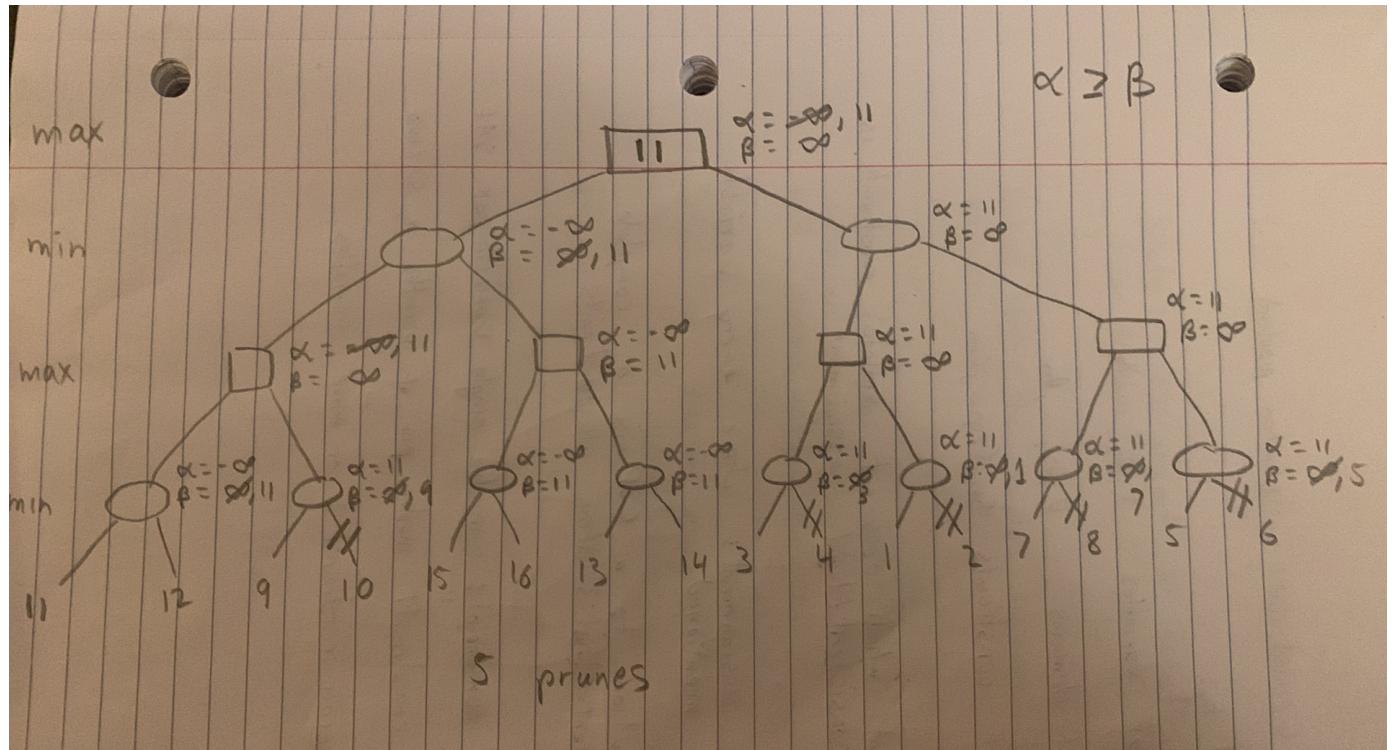
a)



b)



c)



Q3

a)

Q3

a)

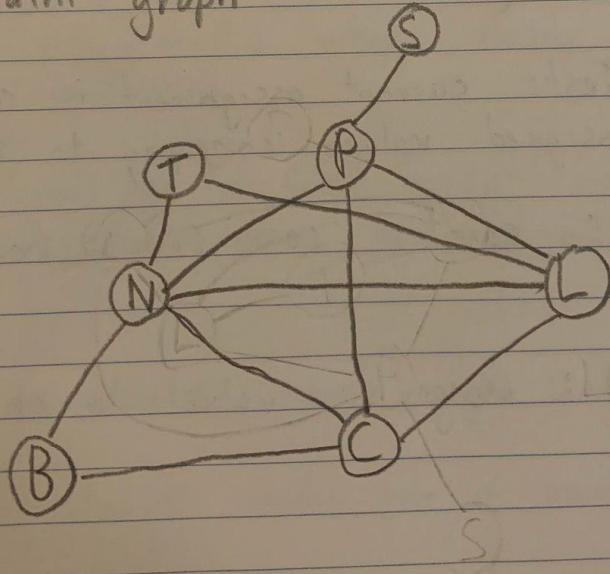
Variables: T, L, B, C, S, P, N

Domain:

The domain is the time slots. ie. $(1pm, 2pm, 3pm, 4pm)$

$$D_i = \{1, 2, 3, 4\}$$

constraint graph



b)

T	L	B	C	S	P	N	
{1}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	MRV, D(T=1), FC(N,L)
1	{2,3,4}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	{1,2,3,4}	{2,3,4}	MRV, D (N=2), FC(P, L, C, B)
1	{3,4}	{1,3,4}	{1,3,4}	{1,2,3,4}	{1,3,4}	2	MRV (L=3) FC(P,C)
1	3	{1,3,4}	{1,4}	{1,2,3,4}	{1,4}	2	MRV, D (C=1) FC(P, B)
1	3	{3,4}	1	{1,2,3,4}	{4}	2	MRV (P=4), FC(S)
1	3	{3,4}	1	{1,2,3}	4	2	MRV (B=3), FC()
1	3	3	1	{1,2,3}	4	2	MRV (S=1), FC()
1	3	3	1	1	4	2	

Assignments of variables shown in the last row of the table above.

Q4

Q4 Greek logic puzzle CSP

Variables:

36 variables one for each square.

Variables $T_{i,j}$ for $1 \leq i, j \leq 6$, where T stands for tile.

12 variables are already assigned.

Domain:

Empty squares have domain $\{\Lambda, \Theta, \Psi, \Phi, \Pi, \Omega\}$

Pre filled squares/tiles have domain consisting of a single value.

Constraints:

All different = All diff

Each letter appears exactly once in each row

All diff ($T_{1,1}, T_{1,2}, T_{1,3}, T_{1,4}, T_{1,5}, T_{1,6}$)
⋮

All diff ($T_{6,1}, T_{6,2}, T_{6,3}, T_{6,4}, T_{6,5}, T_{6,6}$)

Each letter appears exactly once in each column

All diff ($T_{1,1}, T_{2,1}, T_{3,1}, T_{4,1}, T_{5,1}, T_{6,1}$)
⋮

All diff ($T_{1,6}, T_{2,6}, T_{3,6}, T_{4,6}, T_{5,6}, T_{6,6}$)

Each letter appears exactly once on main diagonals

All diff ($T_{1,1}, T_{2,2}, T_{3,3}, T_{4,4}, T_{5,5}, T_{6,6}$)

All diff ($T_{6,1}, T_{5,2}, T_{4,3}, T_{3,4}, T_{2,5}, T_{1,6}$)