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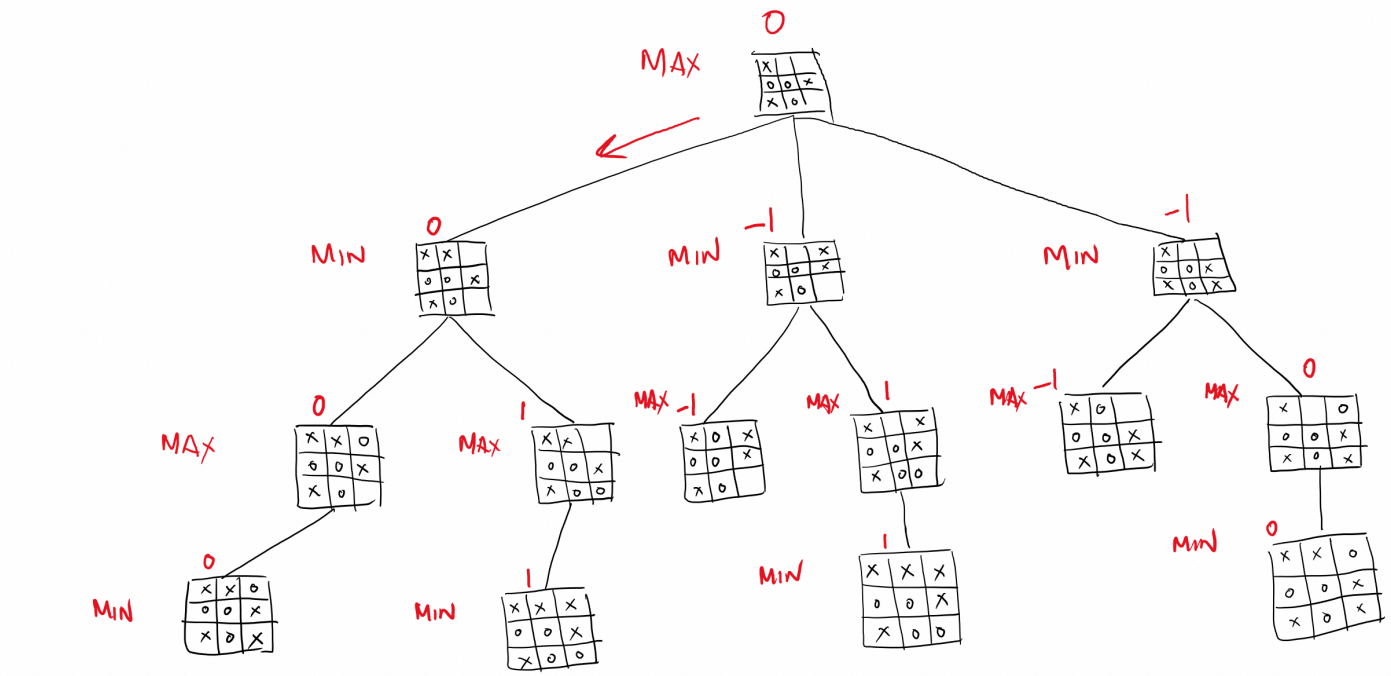
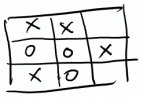
(1)



X player can only play  inorder to maximize

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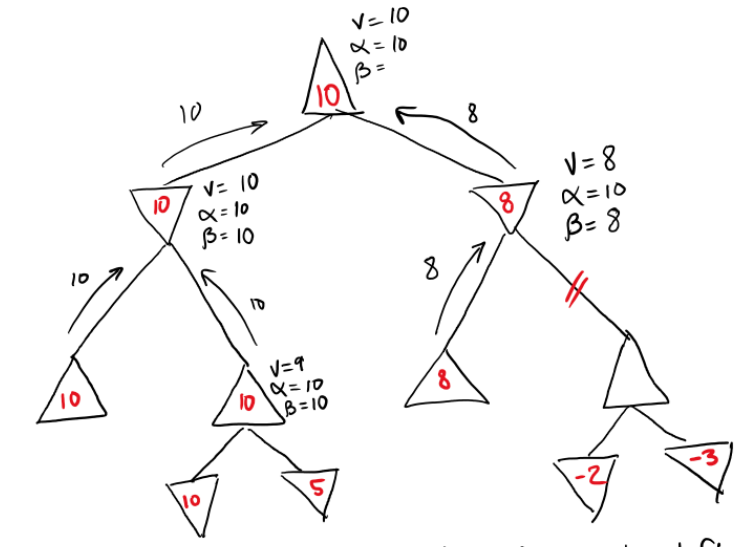
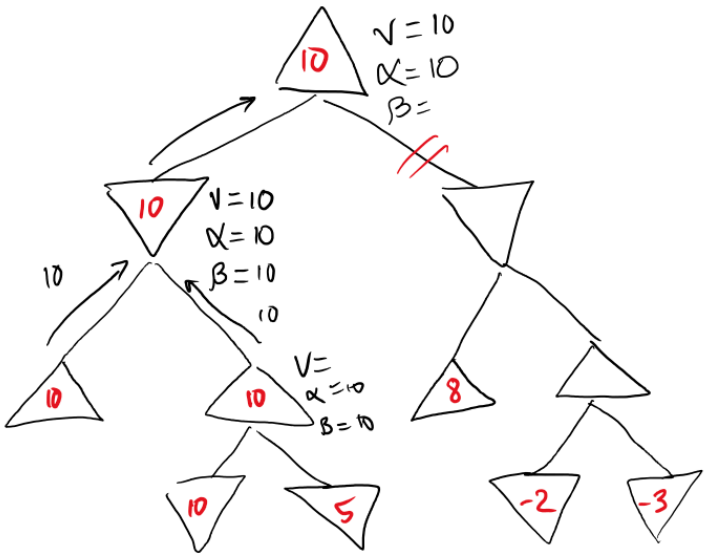
2

a



To maximize, take the branch to the left

b



Whenever max play see a 10 return as a max, it can stop exploring because it already found the best possible outcome

(3)

DeepGreenMove(S) Minimax Style

Given the current state of the game
Explore all possible move it can currently make

For each of the possible move,
check to see which is the best move
among the rest.

To do that, it will run a test for
all the possible move the opponent
can make against it for each possible
move it can make.

and for each of those possible move
the the function will call itself
to calculate the best possible
for that state...
it repeat until it reach
the end of the game.
the function return
the best possible path
for the given state.

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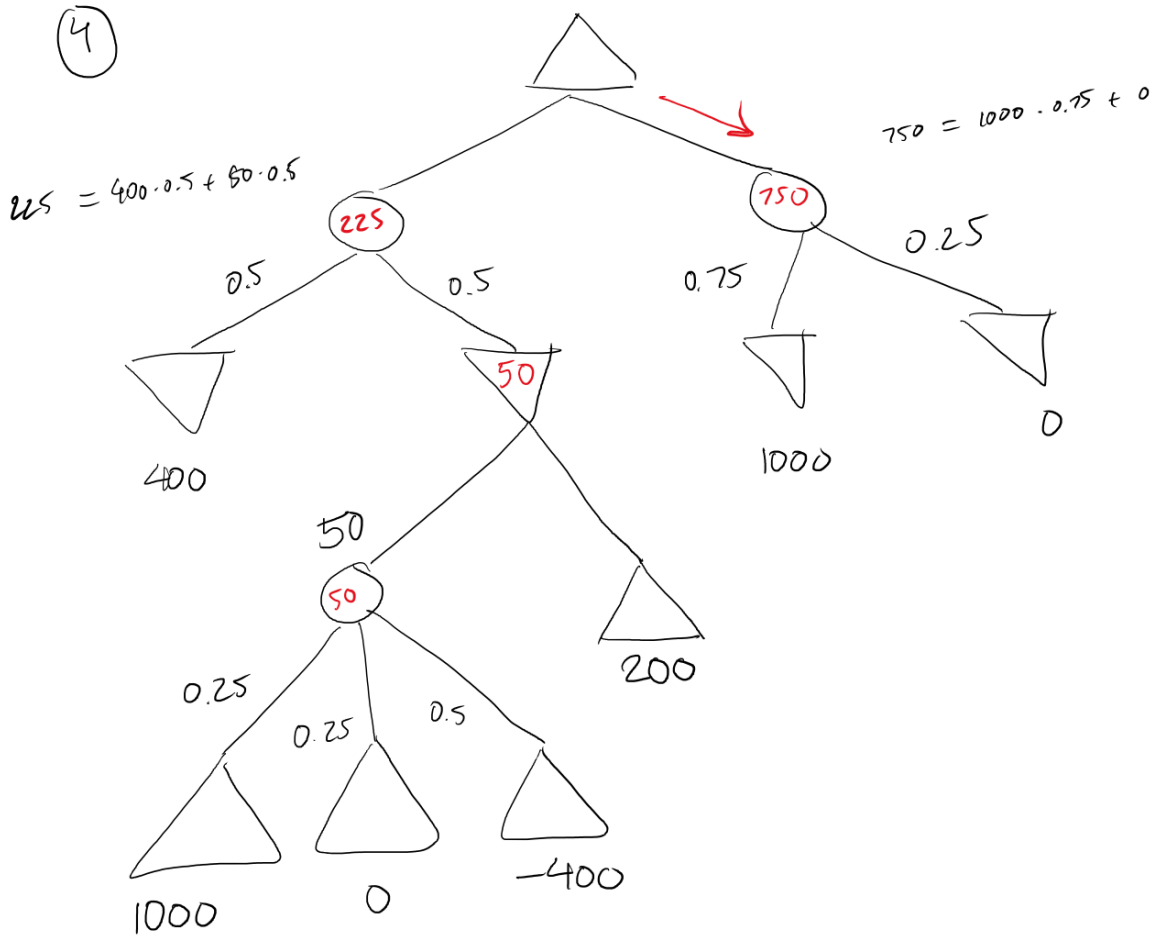
4



50 = 1000 · 0.25 + 0 + −400 · 0.5

It will take the right path

with average 750

High 1000

Low 0

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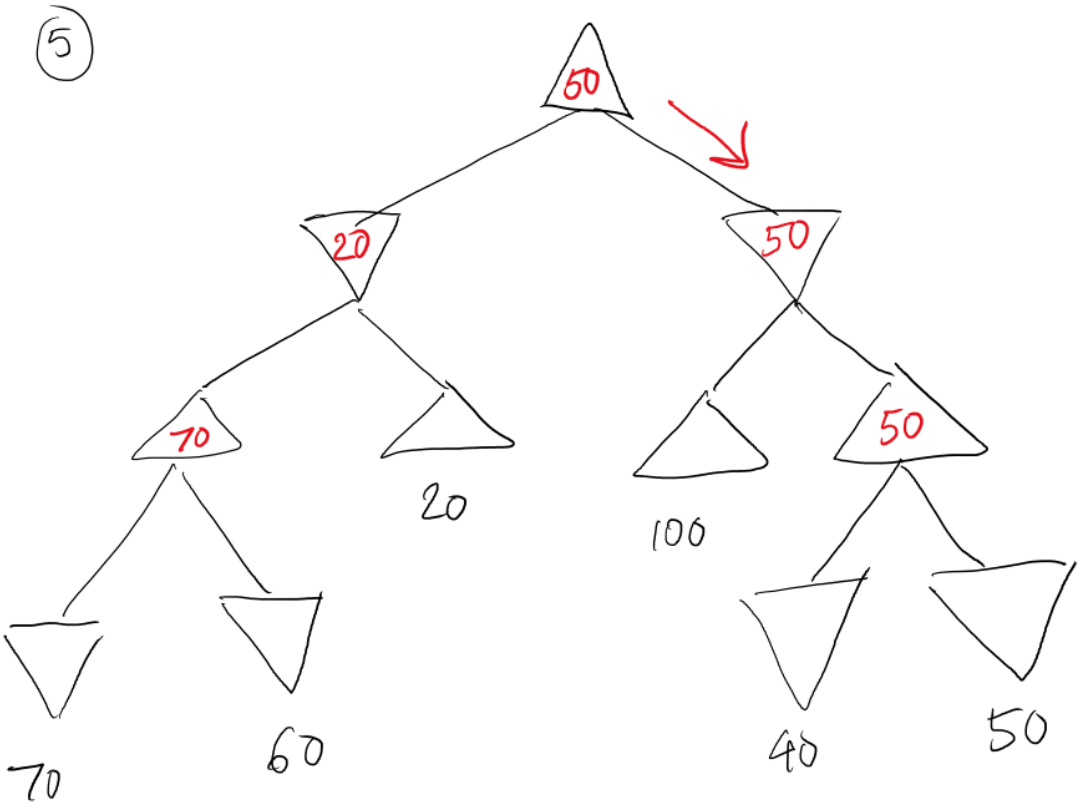
(5)



if we are following minimax and the opponent is unknown, by following minimax we can get a max score of 50 or 100 if opponent messed up

if opponent follow minimax highest we can get is 50,

other wise, we can get upto 100

Taking the right path

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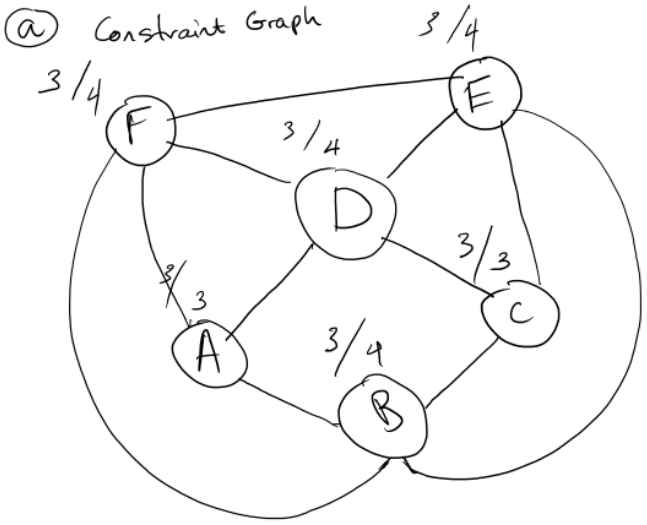
6

(a) Constraint Graph



(b) Backtracking MRV and Degree Heuristic to select variable

- D was selected because all has 3 options and it has heuristic 4 — Green
- A was selected because it has 2 options left and it has heuristic 2 — Blue
- F - only 1 option left — Red
- B - only 1 option left — Green
- C - only 1 option left it has heuristic 1 — Red
- E - only 1 option left — Blue

D	Green
A	Blue
F	Red
B	Green
C	Red
E	Blue

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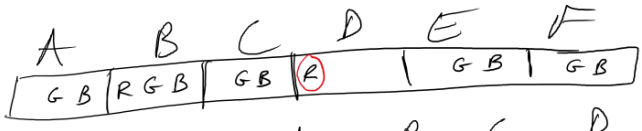
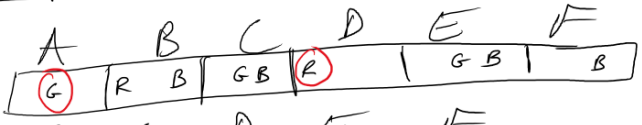
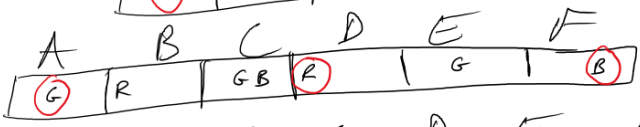
(c) – D Red



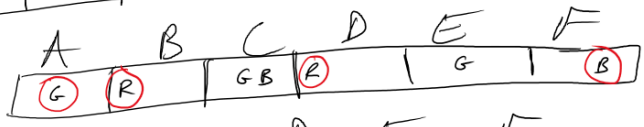
– A was selected because it has 2 options left and it has heuristic 2 – Green



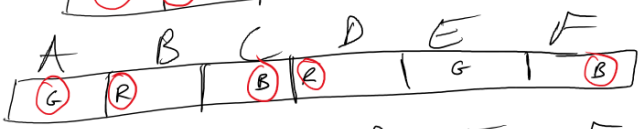
– F - only 1 option left – Blue



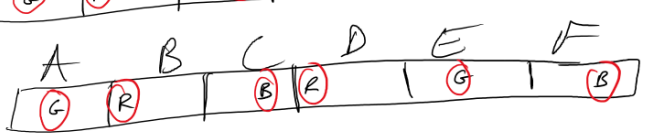
– B - only 1 option left – Red



– C - only 1 option left it has heuristic 1 – Blue



– E - only 1 option left – Green



(d)

D	Green
A	Blue
F	Red
B	Green
C	Red
E	Blue