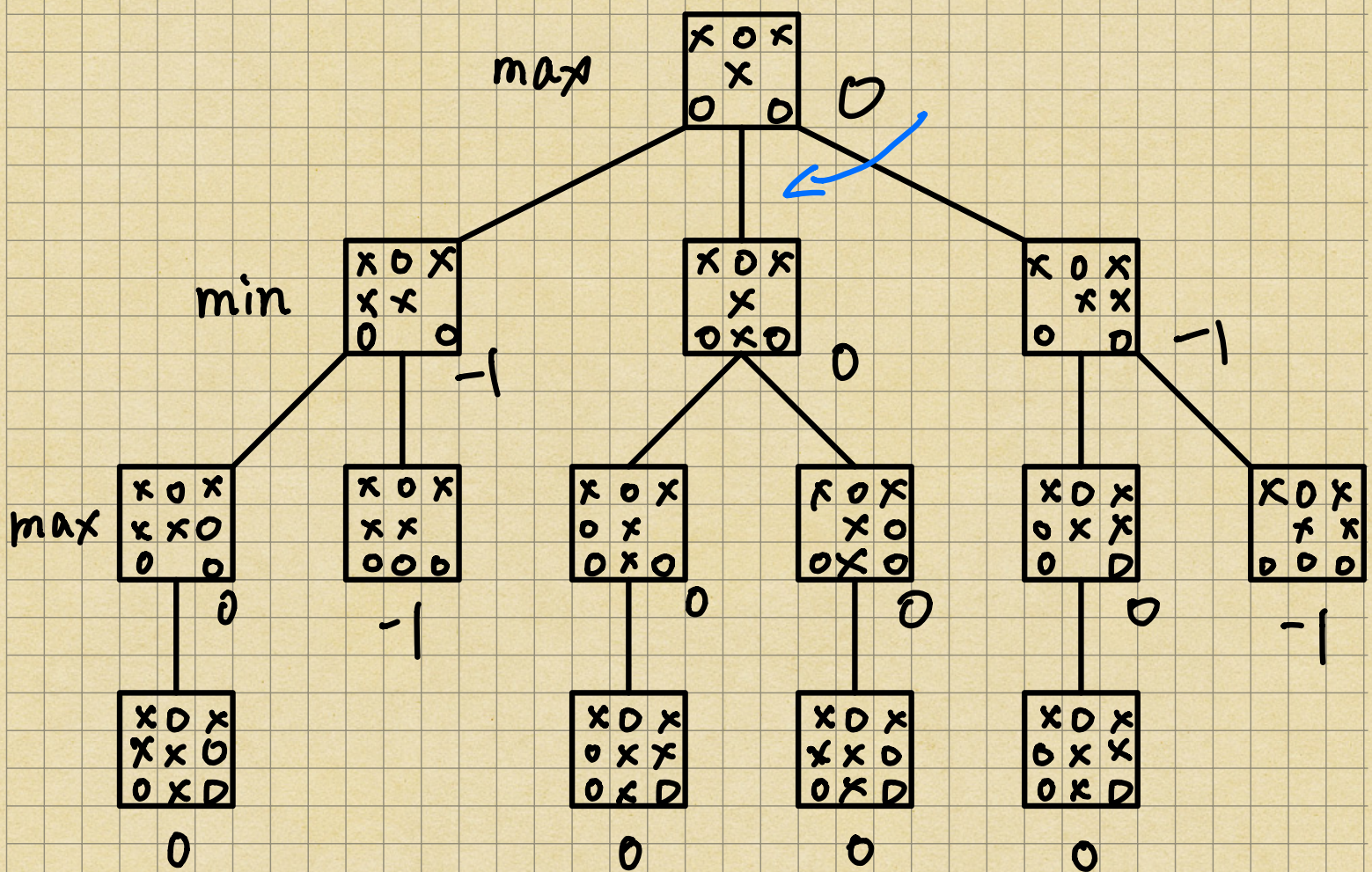


# Assignment 2.

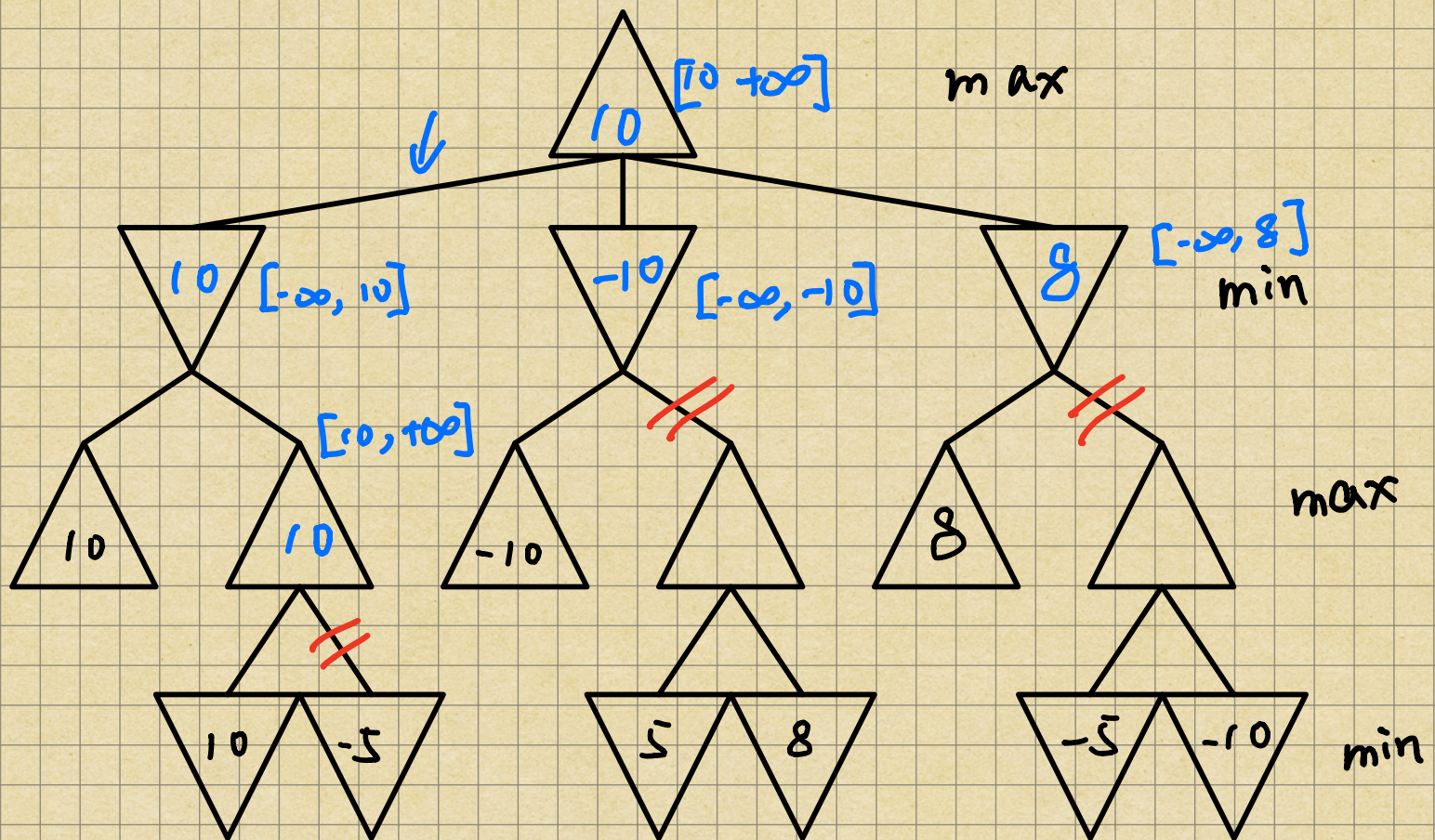
## problem 1





problem 2.

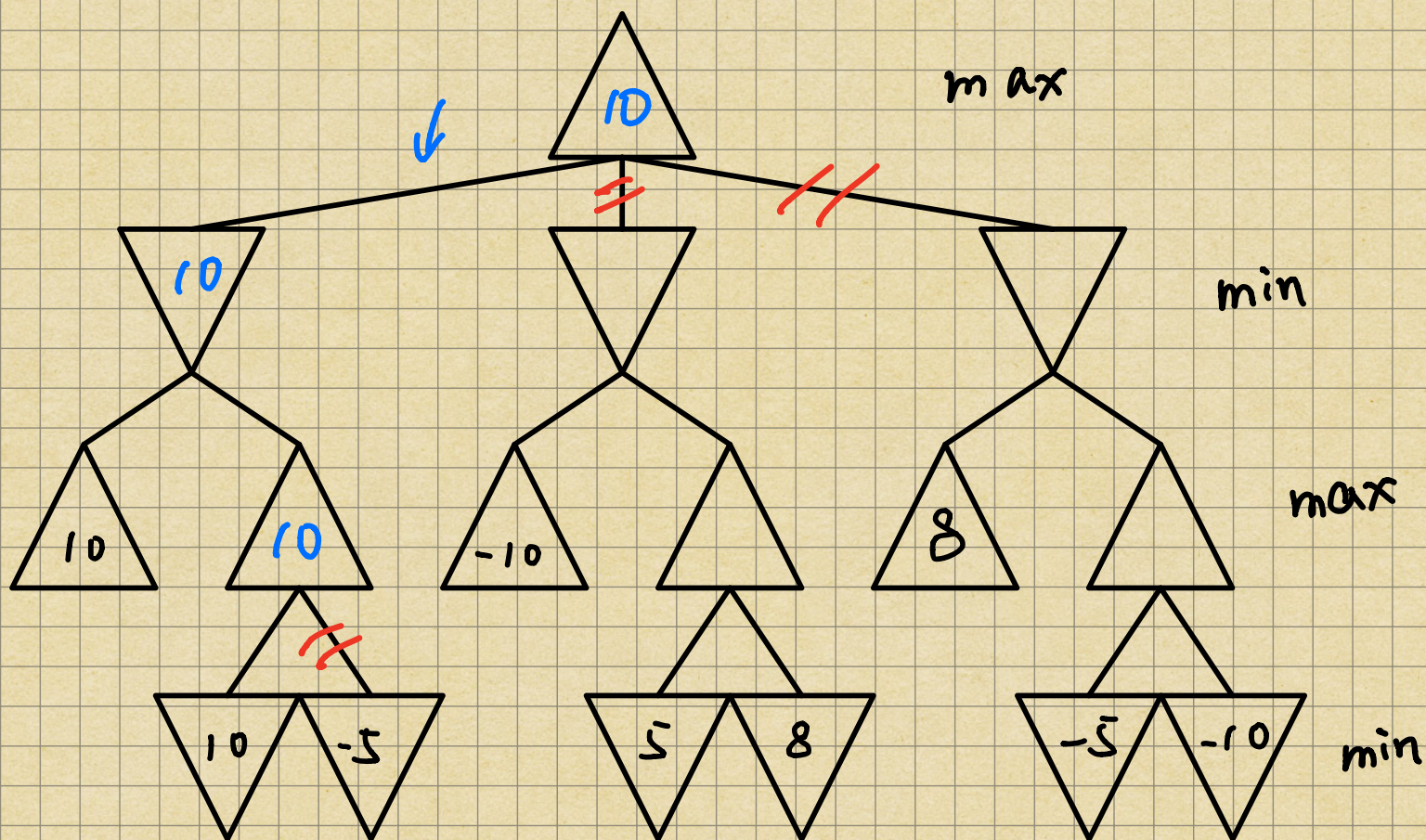
a.



b.

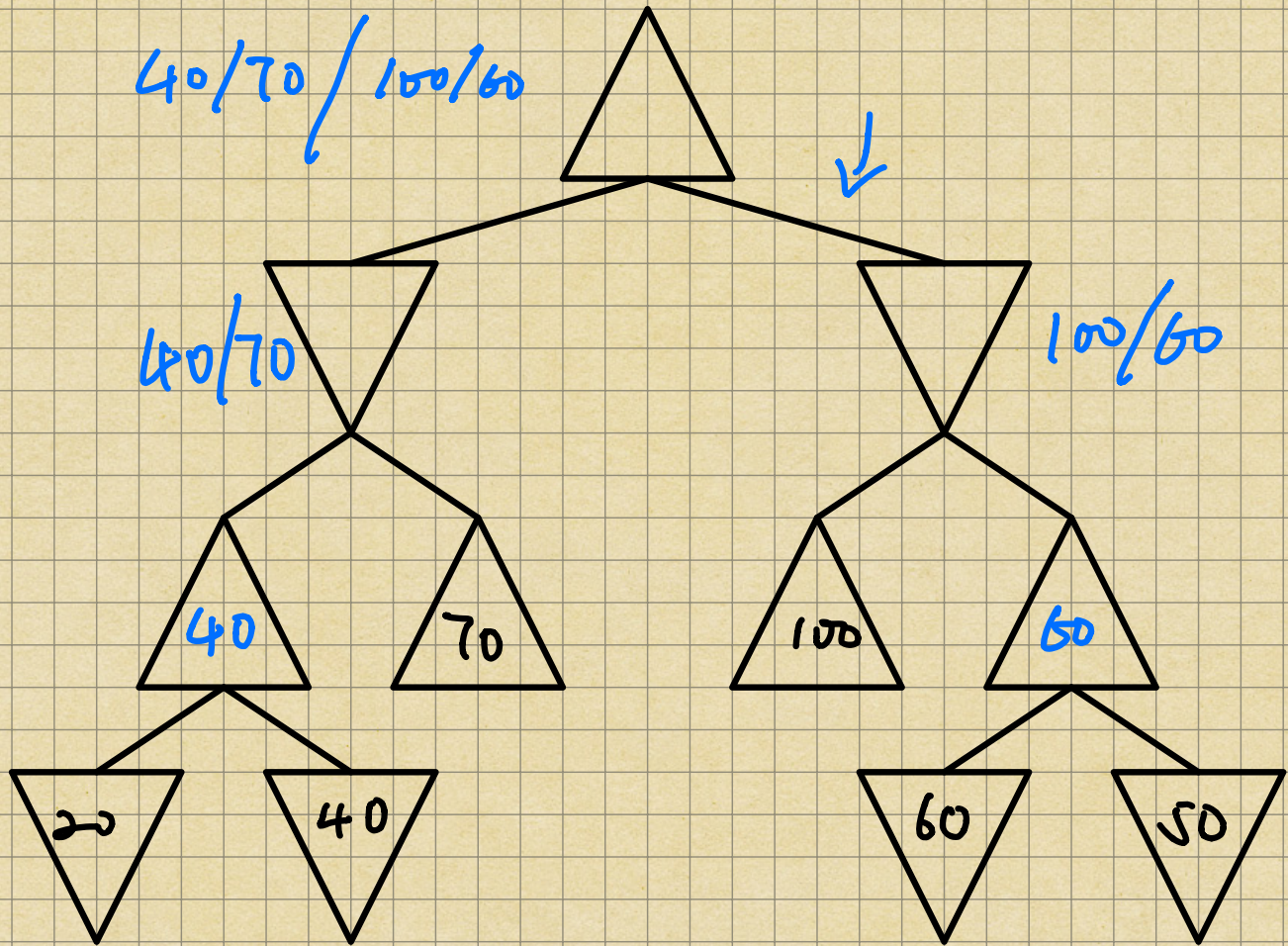
If we knew max value is 10 and min value is -10. we don't need to explore children if max node is 10







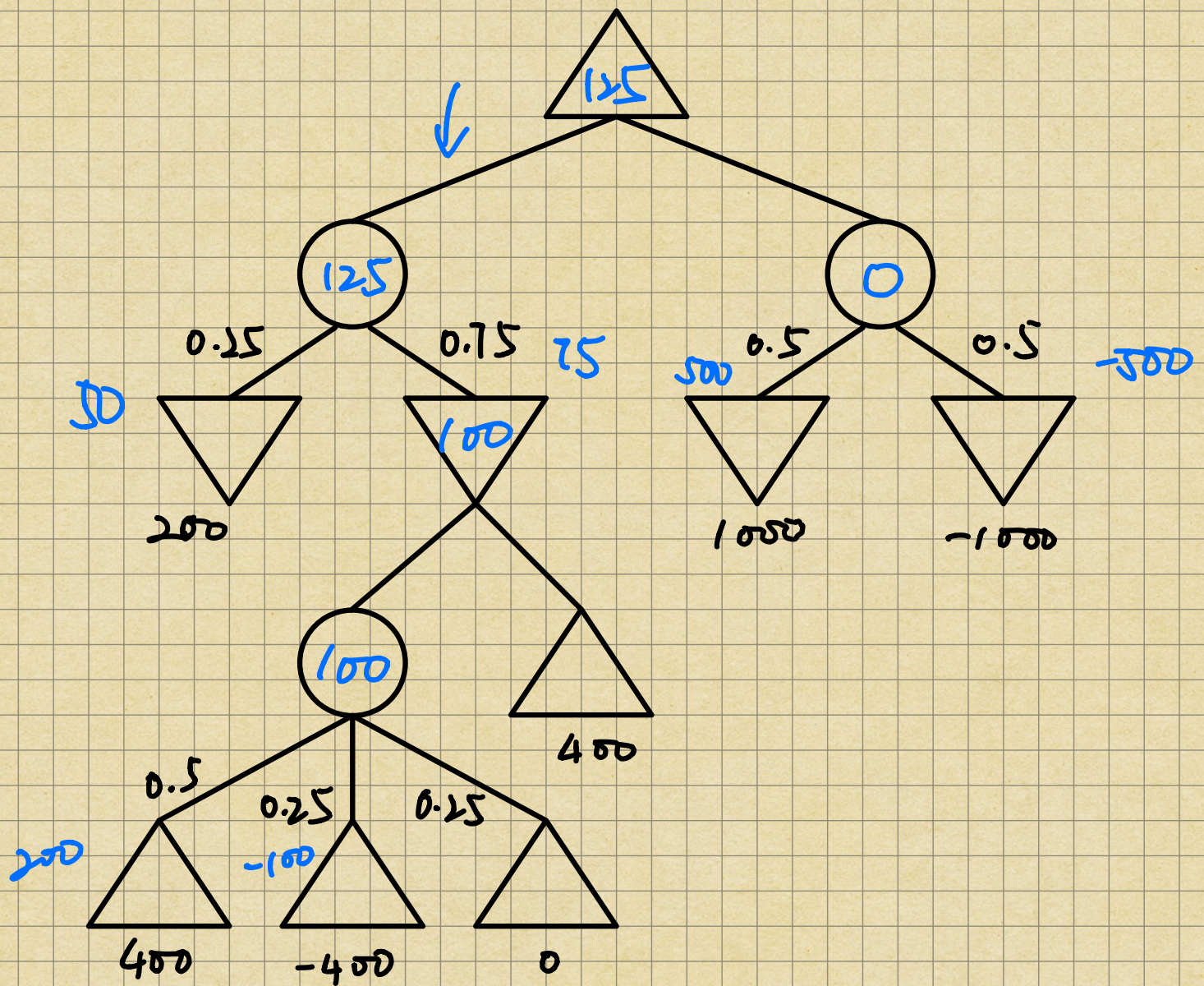
# problem 3



Because we don't know what algorithms the opponent use so we can not clear second level's node so. the best value is 100 the worst value is 60



problem 4.



The value of root node represent expectation  
assume that if opponent use random strategy  
the max value is 400 the min value is  
-400



problem 5

Because opponent use Deep Green Move So  
we modify MIN-VALUE function:

function MIN-VALUE( $state$ ) returns a utility  
value

if TERMINAL-TEST( $state$ ) then return  
UTILITY( $state$ )

$v \leftarrow \infty$

New- $State \leftarrow$  Deep Green Move ( $state$ )

for  $a, s$  in SUCCESSORS(New- $State$ ) do  
 $v \leftarrow \min(v, \text{MAX-VALUE}(s))$

return  $v$

else

return MAX-VALUE (Deep Green Move ( $state$ ))