

## HomeWork 2

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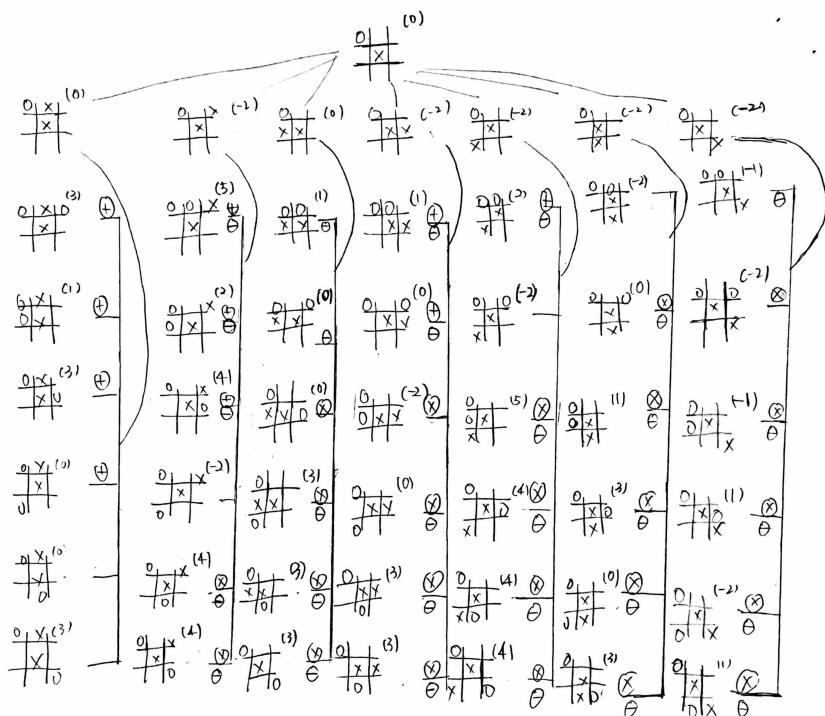
October 19, 2016

## Problem 1 Solution:

(a)

(b) Maximum depth is 9(if the depth of root is 0).

(c) The graph is below

Left to Right marked as  $\otimes$ Right to left marked as  $\oplus$ Optimal order marked as  $\ominus$ 

## Problem 2 Solution:

Yes, consider the following evaluation function  $f$ ,  $f(x) = 1$ , if  $x$  is a winning state,  $f(x) = -1$  if  $x$  is a lost state, and  $f(x) = 0$  if  $x$  is a tie state. Applied  $f(x)$  into this game tree . Thus alpha-beta pruning can correctly applied in this problem.

Problem 3 **Solution:**

- (a) move to  $B$
- (b)  $O, Q, I, T, U$

Problem 4 **Solution:**

Problem 5 **Solution:**