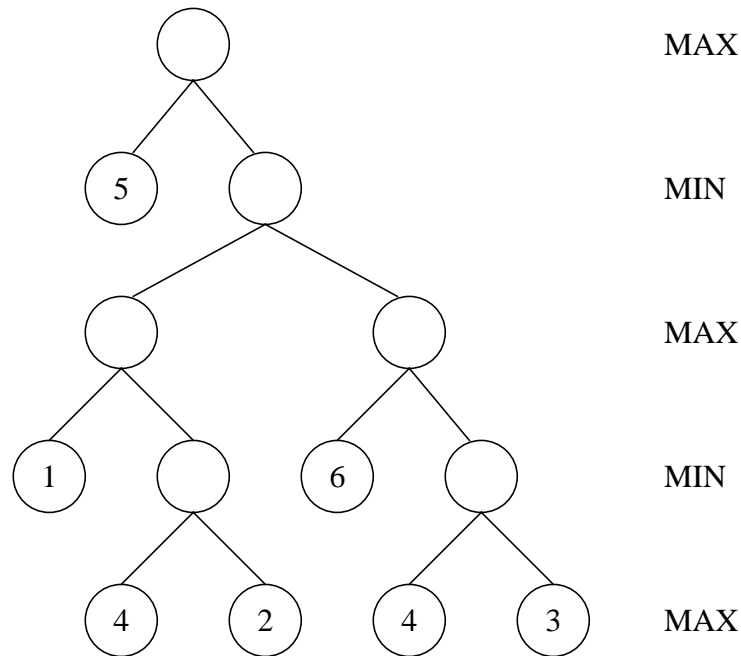CS4600 - Homework 2 - Game Playing

1. What is the minimax value of the root node of the above game tree? Cross out the node(s) whose value(s) the alpha-beta method never determines, assuming that it always generates the leftmost successor node first. Determine the alpha and beta values of the remaining nodes(s).

2. Assume that you are given a version of the alpha-beta method that is able to take advantage of the information that all node values are integers that are at least 1 and at most 6. Determine ALL values for X that require the algorithm to determine the values of ALL nodes of the following game tree, assuming that the algorithm always generates the leftmost successor node first.
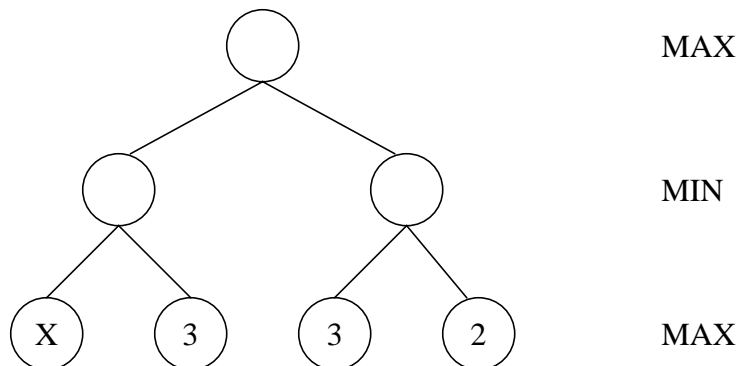
3. The minimax algorithm returns the best move for MAX under the assumption that MIN plays optimally. What happens if MIN plays suboptimally? Is it still a good idea to use the minimax algorithm?