**1/24/18**

07-Adversarial-Search-I

in pseudocode for Minimax, plyLeft is the amount of moves you are looking head, 1 = look ahead 1 move.

Minimax example with checkers

08-Adversarial-Search-II

**Alpha-Beta Pruning**

* minimax procedure: recursive DFS
* pass along two parameters
  + alpha
  + beta
* alpha-beta forms an interval.
  + the range of values that are still possible for the node that we’re coming from
  + interval in which the solution must lie
* Initial alpha beta is
* if any node has , then it is finished so it must prune off any of its children that remains
  + cutoff

**cutoff**

* cut a branch off a tree since we don’t need to examine
* occurs at the Maximizing (minimizing) node where the player makes a move that results in an alpha and beta
* less processing + less time
  + exceed time limit means you lose
* cutoff by being lucky or by being smart in how you order the evaluation of the tree
  + have something good, children after it are worst.
  + ex.: losing queen on accident in chess
  + keeping info from previous move (stage evaluations cached - saved for next turn)