## Homework 4 (due 10/17)

1. In graph partitioning, call a balanced state one in which both sets contain the same number of nodes. (a) How can we choose an initial state at random that is balanced? (b) How can we define the neighbor set N so that every neighbor of a balanced state is balanced? (c) Show that standard GA crossover (uniform) between two balanced states need not be balanced. (d) Suggest an alternative crossover operator that preserves balance.

## HW (continued)

2. Label the nodes of the game tree on the next page with the values assigned by alpha-beta. Assume children are visited left to right.

## Problem 2