CS 461 NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 3

A game search is in progress. The player has the goal of maximizing their score, the opponent is trying to minimize. 5 possible moves are being considered, with 2 replies by the opponent for each. Here are the evaluations:

-1

4

3

3

7

0

0

0

1

2

(5 points) For each move being considered and the root position, fill in the backed-up score.

(3 points) Draw a line from the root through the path indicating best play by both sides.

(3 points each) Hill climbing is an example of a local, greedy algorithm. Briefly (a sentence or two) explain the key idea behind each of these variants:

Stochastic hill climbing:

First-choice hill climbing:

Random-restart hill climbing: