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**CSCI 4202**  
**Artificial Intelligence**  
**Homework #3 02/15/15**

1. Construct heuristic function and apply an  $A^*$  algorithm to the problem "Missionaries and Cannibals".
2. Use the following heuristic function  $E(n)$  and apply Algorithm MINIMAX (With Alpha-Beta cut-offs) with limited depth to the game tic-tac-toe. Pick 3 different position of this game as start states and show 2-ply and 3-ply searches for each of them. Compare results of the 2-ply and 3-ply searches for the same states. Explain. You have to show 6 (= 3 X 2) different searches total. Show cut offs. (dont take start positions considered in class. Don't apply unlimited depth search.).