

Homework 2

Due October 12, 2000

1. True/False
 - a) Depth-first search always finds a solution
 - b) Algorithm A is always more efficient than uniform-cost search
 - c) IDDF has time complexity is in the same order of that of breadth first search
2. Define the following terms
 - a) Open node in state space search
 - b) Admissible heuristic function
 - c) A solution in state space search
3. Briefly answer the following questions
 - a) What is the major problem of breadth first search
 - b) What is the major advantage of IDA* over A*
 - c) What is the “delayed goal testing”? Explain why delayed goal testing is crucial for guarantying the optimality of A* search.
4. Problem 3.3.d of the Textbook (p.87)
5. Problem 4.4 of the Textbook (p.118)