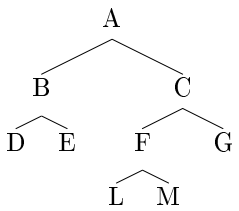
CSE473 Homework #1

Due October 16th 2002 at 10:30 AM in Class on Paper

Name:

Consider the following search tree (the edges are all directed downward) with start state A and goal state M



with this edge cost g between nodes

Edge	Edge Cost
$A \rightarrow B$	9
$A \rightarrow C$	6
$B \rightarrow D$	2
$B \rightarrow E$	3
$C \rightarrow F$	5
$C \rightarrow G$	3
$F \rightarrow L$	7
$F \rightarrow M$	9

and this heuristic cost h to the goal state

Node	Heuristic Cost
A	19
B	11
C	12
D	25
E	26
F	6
G	22
L	27
M	0

1 Node Order

For each of the following search methods, show the order in which the nodes are visited.

1.1 Breadth First

1.2 Depth First

1.3 Uniform Cost

1.4 Greedy

1.5 A*

2 Admissibility

Is the heuristic admissible? Why or why not?

What is the advantage of an admissible heuristic when used by A*?