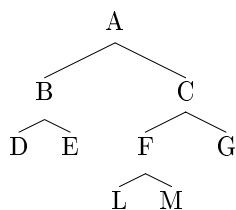


# CSE473 Homework #1

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\*?