# Math 382 

## Homework 5

Due Friday, April 17

1. From the textbook, do problem 16-1.
2. From the textbook, do problem 16-2.
3. Below are two graphs. For each one, complete the following parts.


Graph \#1


Graph \#2
(a) Write the adjacency list representation of the graph.
(b) Write the adjacency matrix represetation of the graph.
(c) List in order the nodes that would be visited in a breadth first search that used vertx A as the source. Assume that when a vertex's neighbors are examined that they are examined in alphabetical order.
(d) Draw the tree created by breadth first search with A as the source.
(e) Draw the tree created with depth first search. As before, assume that anytime the algorithm does not specify the order in which to examine nodes, the possible candidates are examined in alphabetical order. On the tree, label each node with its discover and finishing times.

