HW #6

General Instructions: Homework is to be handed in at the beginning of class. While you may work with others from class, you may not copy. For details on working with others, see the Class Contract (available at the web page), which you have signed.

The Assignment

1. Wells 159.2.6

2. Finan 494 and 495.

3. Finan: Consider the graph and spanning tree from exercise 502. Find a different spanning tree of the same graph which is not isomorphic to the given spanning tree.

4. Finan: Exercise 504

5. Finan: Exercise 506

6. (a) Give a **counterexample** to the following statement:

   > If e is a cut-edge of a graph, then at least one vertex of e is a cut-vertex of the graph.

   (b) Add a hypothesis to the above false statement, so that it is true.

   (c) Prove your statement is true.

7. Make up a mathematical game played on a graph. Your game rules must be absolutely precise and clear.