Math 203 Project I

This project gives you the opportunity to write about some of the mathematics that you have learned. You will probably find that writing about mathematics is challenging, but it will often also help you to clarify your own understanding. In addition, the conciseness and precision required for mathematical writing can benefit your writing in other areas, as well.

Your project report should consist of 2-3 typed pages (although you should use as much space as you think necessary to adequately convey your ideas). Think of the reader as your boss or supervisor, who knows something about graphs, but doesn't know much about Hamiltonian circuits. This person is considering you for a promotion, so you want to make a good impression of how well you can explain things. If you would like preliminary comments on your report, give me a copy by Wednesday, February 27, and I will return it to you with comments during the next class period. The final project report is due in class on **Tuesday, March 5.**

Maximum-Cost Hamiltonian Circuits

Consider an alternative version of the Traveling Salesman Problem, in which the goal is to find a *maximum-cost* Hamiltonian circuit. Explain how you would change the sorted-edges algorithm that we learned, to look for maximum cost circuits instead of minimum ones; make sure to carefully explain your modified algorithm. Then, illustrate your algorithm by applying it to the graph provided below. Also in your report, give two examples of practical situations in which it might be useful to find maximum cost circuits.