

MATH 118 Section G1
Practice Exam #1
February 22, 2006

Name: _____

1. Does the following graph have an Euler circuit? Why or why not?

2. Find an Euler circuit on the following graph.

3. What is one problem that can be solved with an Euler circuit?

4. What is one problem that can be solved with a Hamiltonian circuit?

5. Use Nearest-Neighbor and Sorted Edges to find Hamiltonian circuits on the following graph.

6. Find a spanning tree on the following graph.

7. Find a minimum-cost spanning tree on the following graph. What is the total cost of the spanning tree?

8. What is one application of minimum-cost spanning trees?

9. Use 2 processors to schedule the following tasks with priority list $T_1, T_2, T_3, T_4, T_5, T_6, T_7$. Is the schedule optimal?

10. What is the priority list obtained by using critical path scheduling on the above graph?

11. Write out the steps of the list-processing algorithm in order.

12. What is one application of the list-processing algorithm?