

Instructions: Solve the following problems and be sure to show all of your work.

1. **Examples of Graphs.** Section 8.1 Exercise 6.
2. **Examples of Graphs.** Section 8.1 Exercise 10.
3. **Examples of Graphs.**
 - (a) Section 8.1 Exercise 18.
 - (b) Section 8.1 Exercise 21.
4. **Paths and Cycles.**
 - i. Section 8.2 Exercise 2.
 - ii. Section 8.2 Exercise 3.
 - iv. Section 8.2 Exercise 6.
5. **Paths and Cycles.** Section 8.2 Exercise 20.
6. **Paths and Cycles.**
 - (a) Section 8.2 Exercise 29.
 - (b) Section 8.2 Exercise 30.
7. **Hamiltonian Cycles and the Traveling Salesperson Problem.** Section 8.3 Exercise 2.
8. **Hamiltonian Cycles and the Traveling Salesperson Problem.** Section 8.3 Exercise 4.
9. **Hamiltonian Cycles and the Traveling Salesperson Problem.** Section 8.3 Exercise 17.
10. **Hamiltonian Cycles and the Traveling Salesperson Problem.** Section 8.3 Exercise 20.
11. **A Shortest-Path Algorithm.** Section 8.4 Exercise 2.
12. **Representations of Graphs.**
 - (a) Section 8.5 Exercise 2.
 - (b) Section 8.5 Exercise 8.
13. **Representations of Graphs.** Section 8.5 Exercise 14.
14. **Representations of Graphs.** Section 8.5 Exercise 25.
15. **Isomorphisms of Graphs.**
 - (a) Section 8.6 Exercise 2.
 - (b) Section 8.6 Exercise 9.
16. **Isomorphisms of Graphs.**
 - (a) Section 8.6 Exercise 11.
 - (b) Section 8.6 Exercise 15.