Math 61 Introduction to Discrete Structures   Summer Session A 2024
Homework #5

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

1. **Planar Graphs.** Section 8.7 Exercise 2.

2. **Planar Graphs.** Section 8.7 Exercise 5.

3. **Planar Graphs.** Section 8.7 Exercise 13.

4. **Introduction to Trees.**

    (a) Section 9.1 Exercise 15.
    (b) Section 9.1 Exercise 19.

5. **Introduction to Trees.** Section 9.1 Exercise 24.

6. **Introduction to Trees.** Section 9.1 Exercise 30.

7. **Terminology and Characterization of Trees.**

    (a) Section 9.2 Exercise 8.
    (b) Section 9.2 Exercise 9.
    (c) Section 9.2 Exercise 10.
    (d) Section 9.2 Exercise 11.
    (e) Section 9.2 Exercise 12.

8. **Terminology and Characterization of Trees.**

    (a) Section 9.2 Exercise 23.
    (b) Section 9.2 Exercise 24.

9. **Spanning Trees.** Section 9.3 Exercise 3.

10. **Spanning Trees.** Section 9.3 Exercise 6.

11. **Minimal Spanning Trees.** Section 9.4 Exercise 2.

12. **Minimal Spanning Trees.** Section 9.4 Exercise 15.

13. **Binary Trees.** Section 9.5 Exercise 5.

14. **Binary Trees.**

    (a) Section 9.5 Exercise 10.
    (b) Section 9.5 Exercise 11.

15. **Decision Trees.**

    (a) Section 9.7 Exercise 1.
    (b) Section 9.7 Exercise 2.