

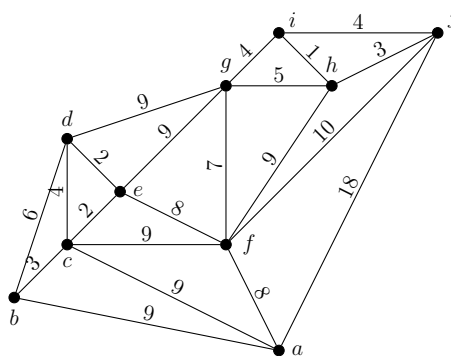
# HOMEWORK 9

## 415G 001 COMBINATORICS AND GRAPH THEORY

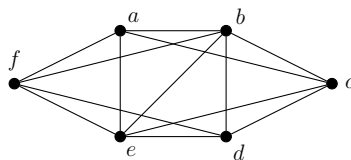
DUE FRIDAY 11/18

### Exercises

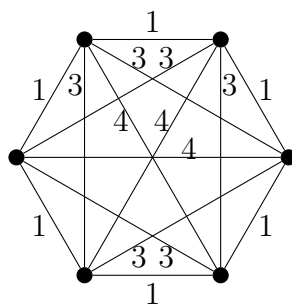
1. Which of the platonic solid graphs are:
  - (a) hamiltonian?
  - (b) eulerian?
2. Apply both the greedy algorithm and Prim's algorithm to the following graph to find a spanning tree of smallest weight (Describe all the process). What is the weight of a minimal spanning tree?.



3. Use the planarity algorithm to determine whether the following hamiltonian graph is planar.



4. Find the best lower bound and upper bound for the TSP solution in the following weighted  $K_6$ .



### Suggested exercises

**From the book.** 4.4, 4.5, 4.8, 4.9, 4.12, 4.13