

Math 154 Homework #2

Spring 2022

Due date: **11:59pm** Pacific Time on **Thu, Apr 14** (via Gradescope)

On the first page of your work, please write a list of everyone with whom you collaborated on this assignment, as well as any outside sources you consulted, apart from the textbook, your notes, and the course staff. If you did not collaborate with anyone, please explicitly write, "No collaborators."

Problem 1.

(a) For which values of n does the complete graph K_n have:

- an Eulerian tour?
- an Eulerian trail starting/ending at distinct vertices?
- a Hamiltonian cycle?

(b) For which values of r and s does the complete bipartite graph $K_{r,s}$ have:

- an Eulerian tour?
- an Eulerian trail starting/ending at distinct vertices?
- a Hamiltonian cycle?

Problem 2. Answer **Question 2.9** at the end of chapter 2 of the textbook.

Problem 3. Answer **Question 2.16** at the end of chapter 2 of the textbook.