Homework 1
Due Date: August 29

Problem 1. Determine if the following graphs contain an Eulerian path. If one exists, then find it, and otherwise, justify why not. Discuss if it is relevant where the starting point is.

- (a)
- (b)
- (c)

Problem 2. Alice and Bob host a part with \( n \) other couples. Some guests shook hands with one another although nobody shook hand with themselves or with their partner. At the end of the night, Alice asks the other \( 2n + 1 \) partygoers how many people they shook hands with, and everyone gives a different answer, i.e., one person shook no hands, one person shook hands with one other person, \( \ldots \), one person shook hands with \( 2n \) other people. Make a guess as to how many hands Bob shook, and explain why you made the guess that you did.