Problem numbers are from the third edition of “Introduction to algorithms”. If unsure about which problem to solve, ask. Collaboration is permitted; looking for solutions from external sources (books, the web, etc.) is prohibited.

1. 22.4-1

2. Consider the graph from 22.4-1. Suppose that the edge from \( z \) to \( m \) is added. Prove that the resulting graph cannot be topologically sorted.