MATC44 - Fall 2025
Assignment 4 - Solutions

Due: November 13, 2025

Instructions: You may collaborate with your peers (and professor) on homework problems related to the course, however, you must write up your own solutions independently. Generative AI tools are not permitted for solving or drafting any part of an assignment. Full credit requires correct solutions with complete justification (e.g., a proof, logical argument or counter-example).

Q1 (5 marks)

For each $n \geq 1$, define the (simple) graph H_n to have vertex set $V(H_n) = \{1, 2, 3, \ldots, n\}$ and suppose that $ij \in E(G)$ if and only if $|j - i| \in \{4, 5, 6\}$. For example, H_8 is drawn below.

