Math 31003: Combinatorics Spring 2026 Quiz 5

Due at beginning of class Monday, March 9

This should be your own work (no other people or software (indluding AI)).

Questions about quiz should be directed to Prof. Arnold

Short explainations are helpful.

Name: _____

1. Let $G$ be the graph $G = (\{1,2,3,4,5,6\}, \{1,2\}, \{2,3\}, \{3,4\}, \{3,5\}, \{4,5\}\})$.

   (a) Draw a picture of $G$ with vertices labeled.

   (b) Give the adjacency matrix, $A(G)$.

   (c) If $G$ is bipartite, draw it in a way that shows this. If $G$ is not bipartite, explain how you know.

   (d) Give the degree sequence of $G$ (as if $G$ was unlabeled).

   (e) Give a longest path from 2 to 5.

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