

Graph Theory 2, MATH 5450, Spring 2023

Homework 4, 9.1. Vertex Connectivity, 9.3. Edge Connectivity

Due Saturday, February 11, at 11:59 pm

Write in complete sentences!!! *Explain* what you are doing and convince me that you understand what you are doing and why. Justify all steps by quoting relevant results from the textbook, class notes, or hypotheses. Do not copy the work of others; **do your own work!!!**

9.1.4. Prove that if G is simple with $n \geq k + 1$ and $\delta \geq (n + k - 2)/2$, then G is k -connected.

9.3.2. (a) Prove that every graph G satisfies the inequalities $\kappa \leq \kappa' \leq \delta$.