

Graph Theory 1, MATH 5340, Fall 2020

Homework 11, 2.6 Even Subgraphs

Due Friday, November 20, at noon

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!!!**

2.6.2. (b) Prove that the vector space $\mathcal{E}(G)$ is isomorphic to the vector space $GF(2)^{|E|} = GF(2)^E$.

2.6.4. (a) Prove that the cycles of a graph G generate the cycle space $\mathcal{C}(G)$.

(b) Prove the bonds of a graph G generate its bond space $\mathcal{B}(G)$.