Graph Theory Weekly Problems 1
Due: 12 Jan 2024 at Midnight EST as a PDF on Submitty
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1. Draw all possible non-isomorphic graphs G in the graph class C defined by the following properties:

   - C is a subset of the simple graph class
   - $|V(G)| = 6, |E(G)| = 8$
   - $C_6 \subseteq G$

   Now, prove that all of the graphs you constructed are each pairwise non-isomorphic.

2. Draw the undirected simple graph $G = (V, E)$, **labeling vertices and edges**, and create its adjacency matrix representation:
   $V = \{v_1, v_2, v_3, v_4, v_5\}$
   $E = \{e_1 = (v_1, v_2), e_2 = (v_1, v_3), e_3 = (v_2, v_4), e_4 = (v_3, v_4), e_5 = (v_3, v_5), e_6 = (v_4, v_5)\}$