Graph Theory and Combinatorics MATH-42021/52021. Home Work 2, due on Tuesday July 24 Instructor: Prof. Artem Zvavitch 13 points (yes, 3 extra points!)

Problem 1. Determine whether the following graph is bipartite. If so, give the partition into the left and right vertices.



Problem 2. If a graph G has v vertices, all of which but one have odd degree, how many vertices of odd degree are there in \overline{G} , the compliment of G?

Problem 3. Please, decide if the following two graphs are planar or not.



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Problem 4. Please, decide if the following two graphs are isomorphic or not.



Problem 5. Please, decide if the following graph is planar or not.



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