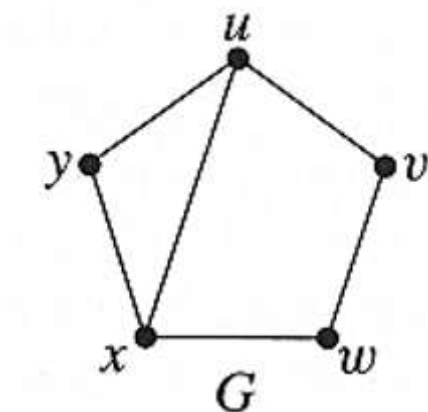


2022 Fall Graph Theory

Homework 1 共十題

Deadline: 2022/10/10 23:59

1. (True or False) There exists a simple graph with 6 vertices, whose degrees are 2,3,3,4,4,5.
2. Determine the values of m, n such that a complete bipartite graph $K_{m,n}$ is a complete graph.
3. Briefly describe the definition of a simple graph.
4. Draw the complement of the following graph :



5. Describe the definition of self-complementary.
6. What is a walk? What is a trail? Is a walk a trail?
7. Describe degree sum formula.
8. Prove or disprove: If u and v are the only vertices of odd degree in a graph G , then G contains a u, v -path.
9. (True or False) Every disconnected graph has an isolated vertex.
10. Prove or disprove: If every vertex of a simple graph G has degree 2, then G is a cycle.