Introduction.

Concepts & Notation

• Sec. 1.1: vertices, $\nu$, edges, $\epsilon$, graph, adjacent, incident, neighbors.

• Sec. 1.2: identical graphs, isomorphic graphs, $G \cong H$, complete graphs, $K_n$, empty graph, bipartite graph, complete bipartite graph $K_{m,n}$.

• Sec. 1.3: incidence matrix $M$, adjacency matrix $A$.

Daily Notes

• Syllabus

• Book

• Daily Plan

• CoCalc

• Daily Homework

• Daily Worksheet

• No Coding or Proving experience assumed

• Algorithms
Notes

1. What is the definition of a *graph*?

2. What is a *drawing* of a graph? (The drawing is not unique!)

3. What are *incident*? What are *adjacent*?

4. What is our vocabulary and notation for the number of vertices? What is our vocabulary and notation for the number of edges?

5. What is a *planar graph*?

6. What are *identical graphs*?

7. What are *isomorphic graphs*?

8. What are *complete graphs*?

9. What is an *empty graph*?

10. What is a *bipartite graph*?

11. What is a *complete bipartite graph*?

12. What is an *incidence matrix* $M$ of a graph? (these are not unique!)

13. What is an *adjacency matrix* $A$ of a graph? (these are not unique!)