

Last name _____

First name _____

LARSON—MATH 356—CLASSROOM WORKSHEET 04
First Theorem of Graph Theory!

Concepts & Notation

- Sec. 1.2: identical graphs, isomorphic graphs, $G \cong H$, complete graphs K_n , empty graphs E_n , bipartite graph, complete bipartite graph $K_{m,n}$, graph complement G^c .
- Sec. 1.3: incidence matrix \mathbb{M} , adjacency matrix \mathbb{A} .
- Sec. 1.4: subgraph ($H \subseteq G$), spanning subgraph, induced subgraph $G[V']$, edge-induced subgraph $G[E']$.
- Sec. 1.5: degree, maximum degree Δ , minimum degree δ

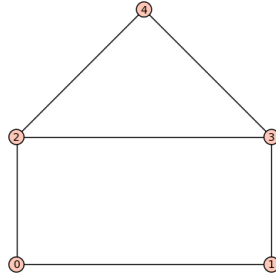
Reminders

1. Remember to email your Notes/Classroom Worksheet prior to the next class.
2. Read ahead in our textbook.

Review

1. What is a *subgraph* of a graph G ?

Notes



1. What is an *induced subgraph* of a graph G ?
2. What is an *edge-induced subgraph* of a graph G ?
3. What is a *graph complement*?
4. What is an *edge-induced subgraph* of a graph G ?
5. What is a *spanning subgraph*?
6. What is the *degree* of a vertex?
7. What is the *minimum degree* of a graph?
8. What is the *maximum degree* of a graph?
9. **Claim:** The sum of the degrees of a graph equals twice the number of edges.