

Graphs: Assignment #4

Your paper should have the following information on it.

- Your name
- Your student ID number
- Which section you are in: 02 MWF, or 04 TTh

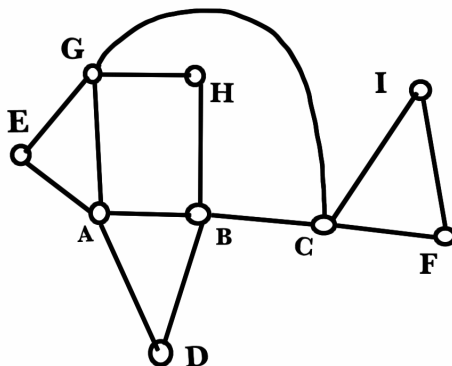
Specifications for Grading

To earn a passing mark, your assignment must:

- be typed, and at least one page and no more than two pages in length. Diagrams may be hand drawn.
- address the tasks and questions below.
- explain your ideas in complete sentences. Use paragraphs to organize your thoughts.
- conform to reasonable standards for grammar, spelling, and usage of the English language with minimal errors. (You may consider seeking help on writing from the Writing Center in the Academic Learning Center. <http://www.uni.edu/unialc/writing-center>)
- be turned in by 3pm on Friday, January 22.

What to do

Task 1. The graph below has its vertices labeled in alphabetical order. Use this ordering in the algorithm for finding an Eulerian cycle. Your end result should be an ordered list of vertices which describe the path you follow along the Eulerian cycle. Write down this list of vertices.



Task 2. Make an example of a graph which **does not** have a 4-coloring. Draw your graph and write an explanation of how you know your example has the property required.

Task 3. Figure out the chromatic number for the graph below. Write a detailed explanation for why you know your answer is the correct one.

