

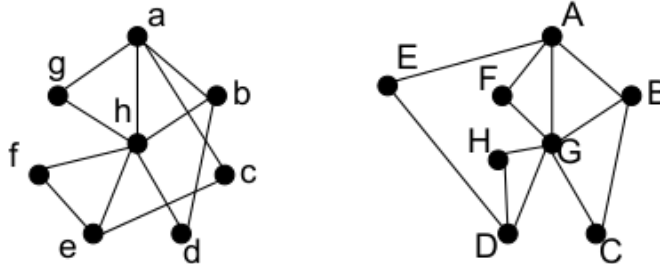
Math 101 Homework

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due 15 Jan 2015

Complete the following problems. Fully justify each response.

1. Suppose you have a graph with 5 vertices. What is the maximum number of edges it can have?
2. Suppose you have a graph with n vertices. What is the maximum number of edges it can have? Explain your answer.
3. Show that the two graphs in the figure below are isomorphic by finding an isomorphism between them.



4. Spend at least 5-10 minutes playing Planarity. While you're playing, remember that every time you move vertices around, you are always looking at the *same* graph, but a *different* embedding.