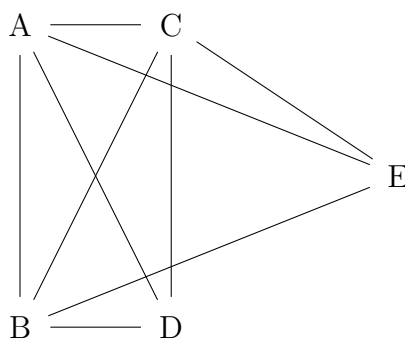# CS 173: Discrete Structures, Spring 2010
HW 12

These problems should not be turned in. They are to help you review for the final.

1. **Planar graphs**

   (a) Show that this graph is planar by redrawing it without crossings:

   (b) Suppose that G is an undirected connected simple planar graph with 10 vertices, all of degree 4. How many edges does it have? Use Euler's formula and the Handshaking Theorem to calculate how many regions it has.

2. **Graph coloring**

   Find the chromatic numbers for the following graphs.