Chapter 10.7 Monday, Week 8

## Warmup

Which of the following exist?

- 1. An Euler path on  $K_4$
- 2. An Euler circuit on  $K_{2,4}$
- 3. A Hamilton path on  $C_6$
- 4. A Hamilton cycle on  $P_5$

How many faces, edges and vertices does a planar drawing of  $K_4$  have?

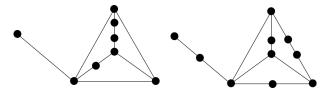
How many faces, edges and vertices does a cube have?

## Tests for Planarity

A kingdom has 5 cities. The king orders the royal engineer to find a way to put a road between every pair of cities so that no two roads fork or intersect. Can the engineer get the job done?

## Subdivisions

What do the following two graphs have in common? How are they different?



In what way is  $C_5$  more similar to  $C_{11}$  than to  $P_5$ ?