

CIS 1600

Recitation Guide - Week 13

Topics Covered: Planar Graphs, Functions

Problem 1: Prove that in any connected planar graph with minimum degree 3, there are at least $\frac{n}{2} + 2$ faces

Problem 2: Let $m, n \geq 2$. Define:

$$f : [1..m] \times [1..n] \rightarrow [2..(m+n)] \text{ by } f(x, y) = x + y.$$

Is f an injection? Is f a surjection? Is f a bijection? Prove your answers.