Honors Homework 4:
Grid Coloring

CMSC 250H

Due Date: Feb 22, 9:00AM, HARD DEADLINE

1. (50 points) Find a n x m grid such that for all 4-colorings of n x m there is a mono rectangle. Prove your answer.
2. (50 points) For all c find n and m such that for all c-colorings of n x m there is a mono rectangle. Prove your answer.
3. (0 points) Challenge Problem: There is an n such that for all 2-colorings of n x n there exists a mono SQUARE. Give me something even if you have no idea to show you thought about it.