

## MATH 1030: Homework 3

due September 7, 2012

**Instructions:** Do the following problems on a separate sheet of paper. Show all of your work.

### Book Exercises

§1D Exercises 28, 32, 41, 48, 50, 51

### Problem 1

Determine whether the following arguments are inductive or deductive. If the argument is inductive, is it a weak or strong argument? If the argument is deductive, is the argument valid or invalid? If the deductive argument is valid, is it sound? Justify all of your answers.

- Premise #1: Tough gangs get articles written about them in the newspaper.
- (a) Premise #2: There is an article in the newspaper about the Orphans.
- Conclusion: The Orphans are a tough gang.
- Premise #1: The Boppers, the Hi-hats, the Moonrunners, the Jones-Street Boys, and the Hurricanes are influential gangs.
- (b) Premise #2: Many gangs, including the Boppers, the Hi-hats, the Moonrunners, the Jones-Street Boys, and the Hurricanes attended the big meeting.
- Conclusion: All influential gangs attended the big meeting.
- Premise #1: None of the Warriors had ever been to the Bronx before.
- (c) Premise #2: Luther had been to the Bronx before.
- Conclusion: Luther is not a Warrior.
- Premise #1: The Warriors are good with any weapons – “real good.”
- (d) Premise #2: Swan is good with any weapon.
- Conclusion: Swan is a Warrior.