

Assignment #2

Important Note: Do not use the printed version of the textbook. Use the e-version of 7th edition.

Part 1: Section 1.6 (Rules of Inference): 14, 16, 20; **in all of these do only parts *b* and *c*.**

Part 2:

1. Use an indirect proof to prove that for integers x if $x^2 - 6x + 5$ is even, then x is odd.
2. a) When asked to prove that “*the sum of any irrational number and any rational number is irrational*”, a student began, “Suppose not. That is, suppose the sum of any irrational number and any rational number is rational.” What is wrong with beginning the proof in this way?
2. b) Use a proof by contradiction to prove the statement (in bold) in part (2.a).

Submission: This is due in class on Wed. Feb. 25, 2015. It is better to submit a typed printed paper (i.e., printed from MS Word)