Dror Bar-Natan: Classes: 2004-05: Math 157 - Analysis I:

Homework Assignment 4

Assigned Tuesday October 5; due Friday October 15, 2PM, at SS 1071

Required reading. All of Spivak's Chapter 4.

To be handed in. From Spivak Chapter 4: 3 (odd parts), 7, 9a, 14 (odd parts).

Recommended for extra practice. From Spivak Chapter 4: 3 (even parts), 6, 9b 14 (even parts), 19, 20.

Required email. If you haven't done that already, by Friday October 8 you *must* do the following:

- Register yourself to CCNET if you haven't already done so. If CCNET doesn't recognize you, it means your student number is not on the class list. Contact me and don't worry too much the system is not that reliable.
- Find yourself in the class photo and send me an email, *from within CCNET* containing the following information: 1. Your name. 2. Your email address. 3. Where are you in the picture? (Use the labels on the picture and in case of possible confusion add a descriptive comment). 4. Your telephone number (optional). 5. Which of the last four pieces of information do you allow me to post on the web? If you don't write anything about this, I'll assume that all information can be posted. The information will be posted within CCNET so it will only be available to registered students, though I cannot guarantee the security of this arrangement.

If you aren't in the picture at all, let me know and I'll take a (small) picture of you on the spot and edit it into the main picture.

Just for fun. Player *A* and player *B* play a game:

- Player A takes 3 blank fair dice and write the number 1 through 18 on their 18 faces, in whichever order she chooses.
- Player *B* looks at the three dice carefully, calculates as much as he chooses to and whatever he wishes to, and then chooses one of the dice for himself.
- Player A chooses of of the remaining two dice for herself, and tosses the other one to the nearest dice recycling bin.
- Then player A and player B play 1,000 rounds of "dice war" in each round they both throw their dices on the table and the person who gets the higher number gets a dollar from the other.

And now my questions —

- 1. Whom would you rather be player A, who marks the dice, or player B, who gets to choose first? (Both players play strictly by the rules and there's no cheating anywhere).
- 2. How much would you be ready to pay to get to choose which player you are?