Assignment #e
Paradox Lost: Abandon all logic, ye who enter here!?
Due on Friday, 1 November, 2013.

You may work together for this assignment, but *you may not look things up or consult anyone other than your classmates and your instructor.* The point is to see what *you* can do with these problems.

The Unexpected Test[†]

In a certain mathematics class Professor B, who always tells the truth and is never mistaken, explains the marking scheme for the course to the students.

"This course meets once each week. There will be only one test, which will be written in class in one of the twelve weeks of the next term. However you will not know which week it is until the class in which the test is given."

1. Is there any way to determine in which week the test is given? Why or why not? If so, in which week will the test be written? *[5]*

Supergame

A two-player game [in which the players take turns making moves] is considered to be *finite* if it cannot go on forever when played by the rules. The two-player game SUPERGAME is played as follows: the first player chooses a finite two-player game, which the two players proceed to play out with the second player going first.

2. Is SUPERGAME itself finite? Why or why not? *[5]*

Bonus: To what classic works of literature does the title of this assignment – *Paradox Lost: Abandon all logic, ye who enter here!?* – pay homage?

[†] No one expects the mathematical inquisition!