

## Homework 2

**Due Date:** Friday, October 18, 2013 at 5:00pm

**Points:** 100

1. (40 points) Please select any work of fiction (such as a book, movie, or poem) that either explicitly states some assumption, or clearly expects or causes the reader (or viewer) to make some assumption, that is invalid by the end of the work. The work may discuss exploiting a weakness in a system, or just take an unusual view of a situation that reveals something previously unknown, or that shows the situation is not as it seems. Please write at most 1 page about the twist and how it relates to the assumptions that characters in the work (or targets of the twist) make, as well as how the twist illustrates the (mis)placement of trust in the assumptions.

Please remember to identify the work you are writing about.

2. (30 points) Classify each of the following as a violation of confidentiality, of integrity, of availability, or of some combination thereof. Please justify your answers.
  - (a) John copies Mary's homework.
  - (b) Paul crashes Linda's system.
  - (c) Carol changes the amount of Angelo's check from \$100 to \$1,000.
  - (d) Gina forges Roger's signature on a deed.
  - (e) Rhonda registers the domain name "AddisonWesley.com" and refuses to let the publishing house buy or use that domain name.
  - (f) Jonah obtains Peter's credit card number and has the credit card company cancel the card and replace it with another card bearing a different account number.
3. (10 points) A respected computer scientist has said that no computer can ever be made perfectly secure. Why might she have said this?
4. (20 points) Argue for or against the following proposition: "ciphers that the government cannot cryptanalyze should be outlawed". How would your argument change if such ciphers could be used provided that the users registered the keys with the government?