

## Homework 2 – Due 31 August 2011

### Math 1140 Financial Mathematics

**Collaboration Policy:** You are encouraged to collaborate with your fellow students on this homework. You must turn in individual solutions and you are not allowed to use any written, typed, or recorded artefact from the meeting with your classmates.

**Pledge:** On my honor, I pledge that I have neither given nor received *unauthorized aid* on this assignment.

**Name:**

**Signature:**

**Notice:** Homework turned in on a piece of paper ripped off from your notebook or with illegible handwriting will not be graded.

1. Find what method is used to calculate the interest for one of your credit cards. If you do not own a credit card, research what is the most popular method and use it.
2. Assume you charged \$3,000 on the first day of the credit card cycle and you don't pay the balance on time. How much will you pay in finance charges and interest next cycle? (Please use fictional data if you feel this is an invasion of your privacy).
3. Assume you charged \$3,000 on the last day of the credit card cycle and you don't pay the balance on time. How much will you pay in finance charges and interest next cycle? (Please use fictional data if you feel this is an invasion of your privacy).
4. Nora has a pressing \$22,000 financial need. She can use one of the following methods to pay it:
  - a. Credit card loan with APR= 16.24% and using average daily balance method
  - b. Margin loan with 9% per year interest rate and using daily accrual interest.
  - c. Sell stock. Assume a return on investment of 14.32%.

She can pay back \$3,000 monthly. Which method is the most advantageous for her to use to pay the \$22,000?

The data you have may be insufficient. Use reasonable values for the data you do not have.

If you need you can make simplifying assumptions to be able to solve the problem, but you must clearly state them.