**HARD TIMES, HARD LOANS**  Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Individual Essay Component**

**Directions:**

* On a separate sheet of paper, please neatly perform the calculations for parts (a) and (b).
* You must SHOW ALL WORK (including set-ups) to receive full credit. Pay attention to details.
* **Do not round within an expression, wait until the end of each part.**
* **Round money values to the closest cent.**
* Remember to include units on final answers.
* For parts (c) through (e) please **type** in thoughtful, grammatically correct, and complete sentences. In your paragraphs use proper spelling, correct grammar, as well as complete sentences. Please don’t use bullet points. Keep the reader in mind: your written work should be easy to follow, explain your thinking, support your ideas, and express what you wanted to say. Discuss the question in detail. **Don’t be too brief**. Proofread the paragraphs and write neatly.
* This is an INDIVIDUAL effort…. Do your own work.

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**FACT: Credit card companies use continuous compounding to calculate your account value if you have a balance.**

1. Suppose you have a line of credit for $5000 with 19% APR (annual percentage rate). One month you “max out” your credit card. When the bill comes in the mail, you don’t have enough money to pay the full amount. You only pay $500 of the total amount due that month.
* What balance will you carry forward into the next month?

As an attempt to be more fiscally responsible, you decide not to use your credit card at all until you have paid off what you owe.

* What will your next credit card bill amount be? *HINT: r = APR/12 and t=1.*
* What do you owe in interest that month?
1. Laura, a freshman in college, is approved for a credit card with 22% APR. She purchases $2100 worth of goods using her credit card in one month. Unfortunately, Laura doesn’t have the money to pay back the credit card company. She attempts to avoid paying her debt.
* If there are no late fees, what will Laura owe the credit card company after one year? *HINT: r = APR and t=1.*
* How much of this amount is interest?

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1. Over the past year we have seen a drop in housing prices in the area. Many economists attribute this drop in prices and increase in foreclosures to lax borrowing policies: Banks were allowing unsuitable persons to take mortgages out that were **interest only loans**. Interest only loans are those on which when you make payments, you are only paying the interest that has accumulated, you are not paying anything toward the principle. Do a little research online and discuss the positive and negative implications of interest only loans on today’s housing market. Cite your sources.

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1. Which loan option (finite or continuous compounding) is in your best interest when you invest? Explain why.
2. Which loan option (finite or continuous compounding) is in your best interest when you borrow? Explain why.