Name: _____ Class: ____ Date: _____

Be sure to show your work as you complete this activity. You may write on the back if necessary. Round all amounts of money to the nearest cent.

Part I: Exploring Compound Interest

Explore the growth of money using compound interest. Imagine you have \$1,000 to invest in a 5year certificate of deposit (CD). Research the bank or credit union of your choice to get their rate on a 5-year CD.

Record the basic info here:	
Lending Institution:	
Compounding Rate:	
Annual Percentage Rate (APR):	(Note: APR ≠ APY, annual percentage yield)

Calculate the growth of the balance over time (assuming the interest rate and compounding rate remain the same):

3 years:	 20 years:	
5 years:	 40 years:	

Calculate the time in years needed to reach the given balances (assuming the interest rate and compounding rate remain the same):

\$2000:	\$4000:	_
****	A 40000	
\$8000:	\$16000: <u> </u>	_

What is the pattern for doubling your money? About how long does it take for your balance to double? Answer in a complete sentence.

 Name:
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Part II: Comparison Shopping with Compound Interest

Imagine that three years into your five-year CD, a competing bank offers a two-year CD at an interest rate 2% higher than your APR. Imagine also that this other bank offers a different compounding rate.

Record the new CD info here:

New APR:

New Compounding Rate:

(Choose between daily, monthly, or quarterly)

You would like to switch your CD to the new bank and enjoy the higher returns, but there is a penalty for early withdrawal from a CD. This penalty is typically equal to the first 180 days of interest earned.

Given this penalty, do you think you will come out ahead if you switch for the next two years to the new CD? To guide your thoughts on this problem, answer the following questions and record your responses below.

- 1. Compute the penalty for early withdrawal and record below:
- 2. Compute how much interest you will earn over the last two years on the original 5-year CD and record below. (Hint: use your answers from Part I):
- 3. Before you switch to the new CD, compute how much money you can take with you after 3 years on the original 5-year CD. (Hint: don't forget to subtract the penalty from step #1.)
- 4. Compute how much interest you will earn over the next two years on the new 2-year CD if you switch your balance to the new CD. (Hint: start with the amount from step #3.)
- 5. Using your computations from above, do you come out ahead or behind if you switch? Exactly how much do you gain or lose if you switch? Answer in a complete sentence.