Name _____Period_____Date_____

Is Your Interest Working For You? (Key)

Using your math skills and a calculator, you will complete the following problems. At the conclusion, you will evaluate: Is this interest working for you or against you? Interest you pay is working against you because it reduces the amount of money you can spend on other things. Interest earned on investments works for you because it increases the money you can spend on other things.

1. You invested $1,000.00 at 5% interest. At the end of one year, you will have ____$1,050.00_____. That means you have earned _____$50.00_____ in interest. The second year you will earn interest on interest (compounded interest), and your total investment will be ____$1,102.50_____.

   Is this interest working __x___ for you or _____ against you?

2. You owe $1,000.00 on your credit card with a 20% annual interest rate. Keep in mind that you need to divide the 20% by 12 because there are 12 months in a year. You decide to pay your card off in four months. If you pay $250.00 each month plus interest, how much will you pay each month?
   a. Month 1 ____$266.00___ Interest __ $16.00_____
   b. Month 2 ____$262.00___ Interest __ $12.00_____
   c. Month 3 ____$258.00___ Interest ___$8.00_____
   d. Month 4____ $254.00____Interest ___$4.00_____
   e. Total Interest paid _____$40.00_____

   Is this interest working _____ for you or ___x____ against you?

3. Assume you deposit $5,000.00 in an investment at an interest rate of 6% compounded annually. Calculate your earnings using the following table.

Year	Beginning Balance	6% interest	Ending Balance
1	5,000.00	300.00	5,300.00
2	5,300.00	318.00	5,618.00
3	5,618.00	337.08	5,955.08
4	5,955.08	357.30	6,310.38
5	6,310.35	378.62	6,689.00
6	6,689.10	401.34	7,090.44
7	7,090.44	425.42	7,515.86
8	7,515.86	450.95	7,966.81
9	7,966.81	478.00	8,444.80
10	8,444.80	506.68	8,951.48

Is this interest working __x__ for you or _____ against you?

How is compounding interest different than simple interest? In the previous problem, how much would you have after ten years if you were only paid simple interest?

Compounding pays interest on interest where simple interest only pays interest on the principal. In the problem above, you would only have $8,000.00 after ten years if you were only paid simple interest.