Name: Date:

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Math 1025 **Consumer Finance Test 1B**

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- simple interest $I = PRT$ and $A = P + PRT$
- compound interest $A = P\left(1+\frac{r}{n}\right)^{nt}$

1. Jennie takes a simple interest loan for $750 at 8% per annum. If she pays the loan back after 4 years, how much interest will she have to pay?

2. Steven takes a simple interest loan of $825 has at 11.5% per annum for 4 years. How much will he ultimately pay back at the end of the 4 year period?

3. Nigella invests $1080, leaving it for 5 ½ years at 4.25% per annum simple interest. Find the future value of the investment.

4. Leslie completed the following calculation.

$$A = P + PRT$$
$$A = 700 + (700)(0.09)(2)$$
$$A = 700 + 126$$
$$A = 826$$

Create a simple interest question that would use this calculation to find the answer.

5. Daisy takes a simple interest loan of $1300 for 9 months. If the rate of interest is 5% per annum, how much will Daisy ultimately pay back at the end of the 9 month period?

6. Bob completed the following calculations using the compound interest formula:

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$$A = 4500\left(1 + \frac{0.06}{2}\right)^{2x6}$$

AAA
A = $6 417.92

Based on Bob's calculations,

a. how much money did he invest? _____
b. how long did he invest the money for? _____
c. what was the interest rate? _____
d. how often was the interest compounded? _____
e. how much money did he ultimately end up with? _____

7. Kelly has $2400 to invest for a 5 year period. He can choose an investment plan whose interest rate is 4.5% compounded annually, or a plan whose rate is 4.5% compounded monthly. Which plan should he choose? Justify your answer by showing your calculations.

8. Milly wants to invest $1600 for 7 years. The first investment plan's interest rate is 6% compounded annually. The second plan's interest rate is 5% compounded daily.
    a. How much money will Milly have in the first plan after 7 years?
    b. How much money will Milly have in the second plan after 7 years?
    c. Which plan should she choose? Explain.

9. Nancy is going to invest $3000 for 6 years in a plan that pays 3.5% compounded semiannually. How much is the investment worth after 6 years?

10. Explain why compounding interest generally gives a larger future value than simple interest does.