Name Date

Math 1025 **Consumer Finance Test 2A**
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This test will cover the following topics:

- simple interest $I = PRT$ and $A = P + PRT$
- compound interest $A = P\left(1 + \frac{r}{n}\right)^{nt}$
- loans with equal payments (TVM Solver), and
- investments with equal payments (TVM Solver)

If your answer requires that you use a formula, show all your calculations. If your answer requires that you use the TVM Solver, record the numbers that you entered in each of the calculator's fields (N, I%, PV, PMT, . . .). There is a sheet attached with fields for these numbers. Be sure to label each one with the correct number of the question you are answering.

1. Jack takes a simple interest loan of $980 at 8% per annum for 3 years. How much in total will he ultimately pay back at the end of the 3 year period?

2. Tami invested $900 for 4 years at 6% per annum simple interest. How much interest will she earn?

3. Ryan has $850 to invest. He is going to leave the money in a plan that pays 9% interest compounded semiannually. If the money stays in the plan for 12 years, how much money will he have in the plan?

4. You deposit $600 in a savings account at 3.8% compounded monthly. If you leave in the account for 7 years, how much would you have after that 7 year period?

5. The bank is prepared to offer Cindy a car loan at 8.8% compounded monthly. If she can make monthly payments of $328 over 4 years, what size of loan can she afford to take?

6. Marcus needs to replace the siding on his house at a cost of $6300. He decides to use his line of credit that charges 6.6% compounded semiannually to pay for the siding. If he wants to pay off the line of credit by making equal monthly payments over 3 years, what will his monthly payments be?

7. Every month Ruth is going to deposit $70 into an investment fund that pays 5% compounded annually. If she does this for 17 years, how much will she have in the fund?

8. Brianna wants to have $1,000,000 in 40 years. How much does she need to deposit every month into a fund that pays 5.6% interest compounded monthly?

9. Evan and Lei are buying a house and need to take a mortgage of $150 000. They figure that the interest rate over the life of the mortgage will be 7.5% compounded annually. They debate two different payment options. They can make monthly payments of $1308.60 or make weekly payments of $327.15.
   (a) How many monthly payments will they make to pay off the mortgage? How many years will this take?

   (b) How many weekly payments will they make to pay off the mortgage? How many years will this take?

10. Sarah decided to purchase a new video game console for her son using rent-to-own. The $575 unit could be hers for twelve monthly payments of $75. How much did she ultimately pay for the console? If the interest was compounded monthly, what interest rate was she paying?

    Sarah ultimately paid _____ for the game console.

    The interest rate was _____% compounded monthly.

11. You learned about pay day loans in this unit. Briefly explain how they work. Do you think they are a good idea? Do you think the pay day loan industry should be regulated by the government?

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