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1. (12 pts) 5 years ago, you borrowed some money from Rob at a simple interest rate of 11.5%. If the total amount you now repay is \$3,150, how much money did you originally borrow?
2. (12 pts) Parents of a college student want to set up an annuity that will pay \$600 per month to the student for the next 4 years. Write the equation you would use to find out how much they should deposit now at 12% interest compounded monthly to establish this annuity. Simplify, but do not solve the equation.
3. (12 pts) You have saved \$5,000 toward the purchase of a car costing \$12,000. How long will the \$5,000 have to be invested at 9.6% compounded monthly to grow to \$12,000? Give your answer in months, rounded to the next higher month.
4. (12 pts) Rob deposits \$200 each month into an account earning 10.2% compounded monthly. Write the equation you would solve to find out how much money Rob would have after 8 years. Simplify, but do not solve the equation.
5. A car costs \$14,000. Rob pays 20% down and amortizes the rest with equal monthly payments over a 6 year period, paying 16.8% compounded monthly.
 - a) (12 pts) Write the equation you would solve to find out how much Rob's monthly payment would be. Simplify, but do not solve the equation.
 - b) (10 pts) By solving the equation in (a), Rob finds that his monthly payment is \$247.91. How much total interest would Rob pay over the 6 years?
6. (10 pts) What is the effective rate of interest for money invested at 8.7% compounded monthly? Round your answer to the nearest thousandth of a percent.
7. (12 pts) A company estimates it will need \$54,000 in 6 years for a major purchase. If it establishes a sinking fund by making fixed quarterly payments into an account paying 11.6% compounded quarterly, how much should each payment be?
8. (15 pts) An ordinary annuity pays 8.4% compounded monthly. Rob will deposit \$150 monthly for 25 years and then will make equal monthly withdrawals for the next 20 years, reducing the balance to zero. What will Rob's monthly withdrawals be?