

AnsAssignment

Financial Math Assignment

Name: _____

Knowledge and Understanding

1. Calculate the simple interest on \$800 at an annual rate of 4.2% for 6 months. $\$16.8$
2. Calculate the amount, when \$200 is invested for 5 years at 2% compounded annually.
3. Calculate the amount, when \$400 is invested for 3.5 years at 3% compounded quarterly. $\$220.82$
 $\$444.11$
4. Calculate the amount of the annuity, when \$200 is deposited every month for 4 years at 3% compounded monthly. $\$10186.24$
5. Calculate the regular monthly payment for an annuity, when you borrow \$5000 at 5% compounded monthly for 3 years. $\$149.85$

Application

6. Determine the amount of interest you would receive if you invested \$650 at 3.5% annually for 9 months. $\$17.06$
7. Suppose you want to save for a car and you need \$5000 two years from now. What principal should you invest today at an annual rate of 2.5% compounded quarterly? $\$4756.89$
8. A \$2000 Guaranteed Investment Certificate (GIC) has an annual interest rate of 5.5% compounded semi-annually. Determine the value of the certificate after 4 years. $\$2484.76$
9. Troy was awarded \$48000 and he has decided to invest it in an annuity which will pay him 6.8% per annum compounded monthly for 1.5 years. How large is the payment that he will receive every month? $\$2812.52$
10. How much money must be invested now at 6.6% per annum compounded monthly to provide monthly payments of \$400 for 4 years? $\$16834.24$
11. Kim wants to have \$25,000 in 4 years. How much would she have to deposit every month for the next 4 years at a rate of 8% compounded monthly in order to have enough money? $\$443.66$

Communication

12. What is the difference between an annuity and present value of an annuity?

collect interest in R

remove interest from R

Thinking, Inquiry and Problem Solving

13. You just purchased a \$300 000 home. You make a 10% deposit and mortgage the rest at 6% compounded semi-annually amortized over 20 years.

- a) What is the amount of the mortgage? $\$270000$
- b) What is the equivalent rate of interest? 0.004938622
- c) Calculate the monthly payment. $\$1922.91$
- d) How much did you pay for the house? $\$491498.40$