Name: _____ Date: _____

7.4 Annuities

BLM 7–5

1. a) Draw a time line for an annuity of $400 every 6 months that will span a 3-year period if the compounding period is semi-annual with an annual interest rate of 6%.
b) How much will this annuity be worth at the end of the 3 years?
c) How much interest will have been paid in that time?

2. At the end of each month, Devon deposits $250 into an account that pays 6% per year, compounded monthly, for 5 years.
a) How much will be in the account at the end of 6 years?
b) How much interest will have been paid to the account?

3. Mario wants to buy a scooter in 18 months by making monthly deposits at the end of each month. The account he is depositing into will pay 5.2% annual interest, compounded monthly. How much does Mario need to deposit each month in order to have $5000 at the end of the 18 months?

4. Susan makes regular payments of $700 every 6 months into an account that pays interest semi-annually. At the end of 5 years, the account has a balance of $8211.98. What is the annual interest rate for the account?

5. Latisha decides to start saving for a retirement trip around the world. She plans to make regular payments of $50 every month into an account that pays interest at 6.8% annually, compounded monthly. If Latisha's first deposit into the account happens 6 months after her 30th birthday, how much will she have in the account when she turns 65?

6. a) How much does Masoon need to deposit every 2 weeks into an account that pays 8% annually, compounded bi-weekly, to have $400 000 in 40 years?
b) If Masoon plans to deposit $150 every 2 weeks into the account in part a), how much will he have in the account in 40 years?

7. Carly deposits $1000 into an account that pays 5.6% interest per year, compounded semi-annually. How long will it take the account to grow to a value of $19 500?

8. Monique just bought a car for $28 000. She plans to buy a new car in 5 years, when she estimates the value of her current vehicle will be 50% of its original value and the cost of the new car will be 30% more than the price she just paid. Monique plans to invest an amount every month so that when she trades in her current car, the money in the account will cover the remaining amount owed. How much does Monique need to deposit every month into an annuity that will pay 5% per year, compounded monthly, to have enough for her new car?

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