

## Chapter 8 Review

### 8.1 Saving Plans, pages 448–453

- Luisa saves \$40 every week. Determine the total amount she saved in each time period.
  - three months
  - eight weeks
  - one year
- Chen needs to save \$4600 to pay for a course in one year. Determine the amount he needs to save from each paycheque if he is paid bi-weekly.
- Irene made weekly deposits of \$30 into a savings account that pays 3.25% per year, compounded daily. Determine the amount in her account at the end of one year.

### 8.2 The Cost of Renting a Home, pages 454–461

- Hailey is renting a two-bedroom townhouse for \$895 per month plus utilities. She expects to pay \$245 for electricity bi-monthly, \$85 monthly for natural gas, and \$110 quarterly for water.
  - Calculate Hailey's average monthly accommodations expenses.
  - Estimate her total expenses for one year.
- Linh has moved to a new city. She is renting a one-bedroom apartment for \$800 plus electricity. The local electricity company requires a \$100 deposit for new customers along with a \$70 connection fee. Her landlord requires her to pay first and last months' rent prior to moving in.
  - Calculate the total amount that Linh must pay prior to moving in.
  - What other expenses might Linh have to pay before moving in?

- Nelson recently started working as an auto mechanic. He earns \$29.60/h and works an average of 42 h per week. Nelson's net earnings are approximately 80% of his gross earnings. Experts recommend that one month's rent should not exceed one week's income. What is the maximum rent that Nelson should pay?

### 8.3 The Cost of Owning a Home, pages 462–467

- Raminder has owned his home for 16 years. He makes bi-weekly mortgage payments of \$467.97 and monthly property tax payments of \$274.00. Every month, Raminder deposits \$500 into an account for house repairs. He receives bills for electricity, natural gas, water, home insurance, satellite television, telephone, and Internet access. The average monthly total for these expenses is \$630.00. Calculate Raminder's total annual expenses associated with the house.
- One year from now, the Carlsons plan to install an in-ground swimming pool in their backyard. One company quoted \$25 000 for the job.
  - The Carlsons have a savings account that pays 2.95% per year, compounded monthly. How much do they need to save each month to have \$25 000 in one year?
  - Calculate the monthly payment for a three-year personal loan of \$25 000 at 6.9% per year, compounded monthly.
  - How much money would the Carlsons save by paying cash for the swimming pool instead of taking the loan?



9. Petra and Peter want to buy a three-bedroom detached house that currently sells for \$385 900. The annual property taxes for this home are approximately \$3500.
- How much money do they need to make a 15% down payment?
  - How much should they save each month to have the down payment in two years?
  - When they buy the house, Petra and Peter take out a mortgage for \$330 000 at 5.7% per year, amortized over 20 years. Determine their monthly mortgage payment.
  - Calculate the monthly payment to the bank for the mortgage plus the monthly portion of the property taxes.

#### 8.4 Living Expenses, pages 468–477

10. Gustav works part time after school and some weekends. His monthly budget for March is shown.

<b>Income (\$)</b>	
March 1–15	368.24
March 16–31	389.06
<b>Total</b>	
<b>Expenses (\$)</b>	
College fund	200
Room and board	160
Cellular telephone	20
Clothes	135
Entertainment	100
<b>Total</b>	
<b>Balance (Income – Expenses) =</b>	

- What is Gustav's total monthly income?
- What are his total monthly expenses?
- Determine whether Gustav's balance is positive or negative.
- Explain the meaning of his monthly balance.

11. Here is a list of Marta's income and expenses.
- Income: \$586 bi-weekly  
 Rent: \$315/month  
 Gasoline: \$40/week  
 Car insurance: \$105/month  
 Car maintenance: \$30/month  
 Groceries: \$60/week  
 Laundry: \$8/week  
 Clothes: \$85/month  
 Entertainment: \$30/week  
 Gifts: \$25/month  
 Savings: 10% of income
- Use a spreadsheet to design a balanced monthly budget for a month in which Marta receives two paycheques.
  - Open a second spreadsheet. Use the same information to design a balanced monthly budget for a month in which Marta receives three paycheques.
  - Suggest two things Marta can do with the extra money she has in a three-paycheque month.

12. Refer to question 10. Suppose Gustav gets a new part-time job that pays \$800 per month. He decides to save \$60 per month more for college. He also starts saving \$60 per month for a mountain bike. Gustav switches to a new cellular telephone plan that costs \$25 per month. His parents ask him to pay \$50 per month more for room and board.
- Adjust Gustav's budget to reflect these changes.
  - Determine Gustav's new monthly balance.

