

Chapter 8 Answers

Get Set, page 148

- a) \$42.50 b) \$102.00 c) \$187.00
 - \$26.78
 - a) \$743.40 b) \$917 c) \$725.32
 - a) \$879.35 b) \$1007.27 c) \$874.39
 - a) i) \$608.88 ii) \$2556.74
- b) Interest is earned on the principal and the previous periods' interest so the amount for part ii) will be more than four times the amount for part i).
- a) \$51.87 b) \$76.89 c) \$227.03
 - a) \$1867.32 b) \$1845.36 c) \$1816.24
 - a) 16 payments b) 52 payments

8.1 Savings Plans, pages 144–146

Warm-Up

- a) $\frac{33}{50}$ b) $\frac{3}{40}$ c) $2\frac{12}{25}$ d) $1\frac{24}{25}$
- a) $9x + 4y$ b) $6x + 2y$ c) $-4x - 12y$
- a) $y = \frac{3}{8}x + \frac{7}{8}$ b) $y = \frac{1}{7}x - 4$
- 1187.5 cm^3
- $\frac{5}{12}$
- \$960
- median
- \$2638.25

Practise

- a) \$97.46; \$91.93; \$79.23; \$68.84; \$90.21; \$95.03
b) \$523.87
- a) \$120.29 b) \$1443.48 c) \$1470.92
- \$133.33
- \$139.13
- a) \$138.46 b) \$3641.81
- a) i) \$112.00 ii) \$730.00 b) 69 weeks
- a) \$19.75; \$19.48; \$18.65; \$19.67; \$18.62
b) \$999.96 c) \$1009.33
- a) \$1200.00 b) \$2463.37
- a) \$23.01; \$26.94; \$42.81; \$11.03; \$32.54
b) \$684.26 c) \$691.77
- a) \$11 687.42 b) \$11 887.67 c) \$37 022.00
- a) \$303.57 b) \$227.68

8.2 The Cost of Renting a Home, pages 147–149

Warm-Up

- a) 19 b) 630 c) 0 d) 9
- a) 48 b) $\frac{8}{3}$
- a) (0, 4) b) (-3, -2)
- 77.5 cm^2
- median: 17; Q1: 16.5; Q3: 23.5

- 6. 14 years
- 7. annuity
- 8. \$103.22

Practise

- 1. a) \$835 b) \$10 020
- 2. a) \$1274.50 b) \$15 294.00
- 3. a) \$1051.50 b) \$4206.00
- 4. a) \$1159 to \$1405 b) \$15 177 c) \$1264.75
- 5. a)

| Month | Rent (\$) | Electricity (\$) | Natural Gas (\$) | Water (\$) | Telephone (\$) | Satellite Television (\$) | Total Monthly Expense (\$) |
|---|-----------|------------------|------------------|------------|----------------|---------------------------|----------------------------|
| January | 805 | 0 | 67 | 0 | 48 | 47 | 967 |
| February | 805 | 110 | 67 | 118 | 48 | 47 | 1195 |
| March | 805 | 0 | 67 | 0 | 48 | 47 | 967 |
| April | 805 | 110 | 67 | 0 | 48 | 47 | 1077 |
| May | 805 | 0 | 67 | 118 | 48 | 47 | 1085 |
| June | 805 | 110 | 67 | 0 | 48 | 47 | 1077 |
| July | 805 | 0 | 67 | 0 | 48 | 47 | 967 |
| August | 805 | 110 | 67 | 118 | 48 | 47 | 1195 |
| September | 805 | 0 | 67 | 0 | 48 | 47 | 967 |
| October | 805 | 110 | 67 | 0 | 48 | 47 | 1077 |
| November | 805 | 0 | 67 | 118 | 48 | 47 | 1085 |
| December | 805 | 110 | 67 | 0 | 48 | 47 | 1077 |
| Total Annual Cost per Expense (\$) | 9660 | 660 | 804 | 472 | 576 | 564 | 12 736 |

- b) February, August c) \$12 736
- 6. \$2013.00
- 7. a) \$6920.00
- b) Answers may vary. For example: Aaron may need to purchase a bus pass or buy a car.
- c) The total cost of the on-campus residence is greater than the total cost of the shared house if Aaron walks to campus.
- 8. a) \$677.71
- b) She needs to share; her weekly net income is much less than the rent for a one-bedroom apartment.
- 9. \$962.31
- 10. Answers to parts a) to c) may vary. For example:
 - a) How quiet is the apartment during the day? Is there an Internet connection? Is there a separate entrance to the apartment?
 - b) Can I smoke in the apartment? Can I practise with my band in the apartment? Will the electrical sockets fit my guitar amplifier?
 - c) How large is the apartment? Can we have pets? Can we let the cat out into the yard?
 - d) \$11 480

8.3 The Cost of Owning a Home, pages X–X

Warm-Up

- a) 96.14 b) 274 c) 143.66
- 7
-

| x | y |
|-----|-------------|
| 0 | 100 |
| 1 | 200 |
| 2 | 400 |
| 3 | 800 |
| 4 | 1600 |
| 5 | 3200 |

- $\angle x = 39.8^\circ$, $\angle y = 50.2^\circ$, $\angle z = 39.8^\circ$
- 9 times
- 72, 73
- principal
- \$1108

Practise

- a) \$30 547.40 b) \$20 493.24 c) \$53 622.92 d) \$36 937.42
- a) \$856.75 b) \$225.08 c) \$82.38 d) \$124.88
- a) \$2739.01 b) \$32 868.08
- a) \$51 006.32 b) \$50 271.00
- a) 43.2% b) 60.5%
- 22.7%
- a) \$1542.00 b) \$153.33 c) 36.1%
- a) \$577.76 b) \$439.84 c) \$1534.24
- a) January, May, September b) \$36 085.20
- c) \$3499.20 d) \$40 e) \$3552.95

8.4 Living Expenses, pages X–X

Warm-Up

- $\frac{3}{8}, \frac{5}{9}, \frac{7}{12}, \frac{11}{18}, \frac{13}{10}$
- a) $25x^2 + 10x + 1$ b) $-3x^2 - 8x + 3$
- D
- 1.69 m
- 12
- 6 cm
- difference of squares
- \$21 432.32

Practise

- a) \$7163 b) \$716.30 c) \$1302 d) 38.8%
- a) \$586.42 b) \$550 c) positive
- a) \$1773 b) \$4554.30 c) +\$2608.70

4.

| Income (\$) | | Expenses (\$) | |
|---|------------|-----------------|------------|
| Monthly | 805 | College Savings | 175 |
| | | Room and Board | 120 |
| | | Car Fund | 125 |
| | | Cellular Phone | 50 |
| | | Spending | 130 |
| | | Computer Fund | 40 |
| Total | 805 | Total | 640 |
| Balance (Income – Expenses) = +165 | | | |

5. a) \$727.56 b) \$450 c) positive

d) Mei Lin earns more than she spends.

e) Answers may vary. For example: Save more for the car each month.

6.

| Income (\$) | | Expenses (\$) | |
|---|------------|----------------|------------|
| Student Assistance | 350 | Rent | 565 |
| Earnings | 620 | Groceries | 300 |
| | | Laundry | 25 |
| | | Transportation | 75 |
| Total | 970 | Total | 965 |
| Balance (Income – Expenses) = +5 | | | |

Chapter 8 Review, pages 156–157

1. a) \$400 b) \$200 c) \$1300

2. \$191.67

3. \$366.93

4. a) \$1146.25 b) \$13 755

5. \$1930

6. \$943.50

7. a) \$1812.84 b) \$667.29 c) \$2022.44

8. a) \$78 875 b) \$1442.07 c) \$1708.74

9. a) \$820.90 b) \$705 c) positive

10.

| Income (\$) | | Expenses (\$) | |
|--|----------------|-----------------|----------------|
| Paycheque 1 | 722.00 | Rent | 315.00 |
| Paycheque 2 | 722.00 | Car Insurance | 105.00 |
| | | Gasoline | 173.33 |
| | | Car Maintenance | 30.00 |
| | | Groceries | 60.00 |
| | | Laundry | 34.67 |
| | | Clothes | 85.00 |
| | | Entertainment | 130.00 |
| | | Gifts | 25.00 |
| | | Savings | 144.40 |
| Total | 1444.00 | Total | 1102.40 |
| Balance (Income – Expenses) = +341.60 | | | |