Name: _____   Date: _____

Practice Using the TVM Solver

These questions provide extra practice for the Tech Tip on pages 52–53. Fill in the shaded boxes with the correct value(s) from your graphing calculator, then answer the question.

1. Shania is saving to buy a car. She wants to have $5000 for the down payment in 10 months. She has an account that pays 2.4% interest per year.

a) How much does she need to save each month?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Amount she needs to save each month is the _____.

Amount she needs to save each month: _____.

b) Shania gets a raise at her part-time job and decides to add another $50/month to her savings. How long will it take her to save the money now?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Length of time is the _____.

Length of time it will take Shania to save $5000: _____.

2. Sidney has been putting $125/month in a savings account for 2 years. The account pays 3.4% interest compounded monthly. How much money will he have at the end of 2 years?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Amount saved: _____.

Name: _____ Date: _____

3. Shari and Dave want to put a mini bathroom in their basement. Since they can do part of the work, they estimate that it will cost $6000. Their account pays 2.25% interest per year, compounded monthly. Since they are both working, they can afford to save $410 per month.

a) How long will it take Shari and Dave to save $6000?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Length of time to save $6000: _____.

b) If the interest is raised to 2.75%, how long will it take?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Length of time to save $6000: _____.

c) At the interest rate in part b), what payment would they need to make if they already had $1200 saved?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Length of time to save $4800: _____.

d) If the interest rate is 2.5% and they have 15 months to save $4800, how much would they need to save each month?

> **N:** _____ , **I%:** _____ , **PV:** _____ , **PMT:** _____ ,
>
> **FV:** _____ , **P/Y:** _____ , **C/Y:** _____ , **PMT: END   BEGIN**

Amount they need to save each month: _____.

Name: _____ Date: _____

4. Caroline and Andrew want to redo their bedroom floor and paint the walls. They plan to do the painting themselves, but will hire someone to replace the old carpet with a floating floor. They estimate that it will cost $2500 for paint, flooring, and installation. Their account pays 2.10% interest per year, compounded monthly. They can afford to save $190 per month.

a) How long will it take Caroline and Andrew to save $2500?

> **N:** _____, **I%:** _____, **PV:** _____, **PMT:** _____,
>
> **FV:** _____, **P/Y:** _____, **C/Y:** _____, **PMT: END   BEGIN**

Length of time to save $2500: _____.

b) When they check with the bank, they learn that the interest rate has gone down to 1.75%. How long will it take now?

> **N:** _____, **I%:** _____, **PV:** _____, **PMT:** _____,
>
> **FV:** _____, **P/Y:** _____, **C/Y:** _____, **PMT: END   BEGIN**

Length of time to save $2500: _____.

c) At the interest rate in part b), what payment would they need to make if they already had $200 saved?

> **N:** _____, **I%:** _____, **PV:** _____, **PMT:** _____,
>
> **FV:** _____, **P/Y:** _____, **C/Y:** _____, **PMT: END   BEGIN**

Amount they need to save each month:_____.

d) If the interest rate is 1.75% and they have 10 months to save $2300, how much would they need to save each month?

> **N:** _____, **I%:** _____, **PV:** _____, **PMT:** _____,
>
> **FV:** _____, **P/Y:** _____, **C/Y:** _____, **PMT: END   BEGIN**

Amount they need to save each month: _____.

Name: _____   Date: _____

Household and Living Expenses

Household and Living Expenses

Name: _____ Date: _____

Practice With Spreadsheets

These questions provide extra practice for the Tech Tip on pages 64–65. Use a spreadsheet program to complete the questions.

1. Enter the data shown below in a spreadsheet.

Week of	Oct. 31– Nov. 6	Nov. 7– Nov. 13	Nov. 14– Nov. 20	Nov. 21– Nov. 27	
Item	**Amount ($)**				**Total**
Rent	400.00				
Groceries	101.00	124.84	83.68	95.21	
Phone and cable		103.25			
Bus pass	94.00				
Going out	51.25	32.14	79.24	67.00	
Savings	40.00	40.00	60.00	50.00	
Total					

2. Program the spreadsheet to total the data for each row *and* column.

3. Create a circle graph that shows the amount spent on each item as a percent of the total amount spent. Print your finished graph.

4. Create a bar graph showing the amount of money spent each week. Print your finished graph.

Name: _____ Date: _____

Sample Budget Tracker

Date	Expense	Cost
Thurs. Oct. 1	Savings	$50.00
Fri. Oct. 2	Dinner out	$24.16
Sat. Oct. 3	Gas for car	$31.47
	Parking at concert	$10.00
	Drinks and souvenirs at concert	$34.26
Sun. Oct. 4	Rent movie	$5.00
Tues. Oct. 6	Lunch	$5.62
Thurs. Oct. 8	Lunch	$6.01
	Pay back mom from last month	$50.00
Fri. Oct. 9	Out with friends	$32.58
Sun. Oct. 10	Clothes	$47.84
Tues. Oct. 13	Lunch	$6.28
Wed. Oct. 14	Movie and snacks	$16.89
Thurs. Oct. 15	Lunch	$5.89
Sat. Oct. 17	Rent movie	$5.00
Tues. Oct. 19	Lunch	$6.32
Thurs. Oct. 21	Lunch	$6.47
Fri. Oct. 23	Gas for car	$24.00
	Dinner out	$27.24
Sat. Oct. 24	Shopping	$52.53
Sun. Oct. 25	Birthday gift	$30.21
Tues. Oct. 27	Lunch	$5.42
Thurs. Oct. 29	Lunch	$6.83
Fri. Oct. 30	Tickets for game (Bill playing)	$18.00
	Snacks at game	$9.24

Name: _____   Date: _____

Budget Template 1

Category	Budget Amount	Actual Amount	Difference
INCOME			
Net wages			
Net other income			
Income subtotal			
EXPENSES			
HOME			
Mortgage or rent			
Homeowners'/renters' insurance			
Property taxes			
Home repairs/maintenance			
Home improvements			
UTILITIES			
Electricity			
Water and sewer			
Natural gas or oil			
Telephone (land line, cell)			
FOOD			
Groceries			
Eating out, lunches, snacks			
HEALTH AND MEDICAL			
Insurance (medical, dental, vision)			
Out-of-pocket medical expenses			
Fitness (yoga, massage, gym)			

TRANSPORTATION			
Car payments			
Gasoline/oil			
Auto repairs/maintenance/fees			
Auto insurance			
Other (tolls, bus, subway, taxi)			
DEBT PAYMENTS			
Credit cards			
Student loans			
Other loans			
ENTERTAINMENT/RECREATION			
Cable TV/videos/movies			
Hobbies			
Subscriptions and dues			
Vacations			
PETS			
Food			
Grooming, boarding, vet			
CLOTHING			
Clothes			
Shoes			
Other items (hats, outerwear, etc.)			

Name: _____   Date: _____

INVESTMENTS AND SAVINGS			
Savings account			
RRSP or retirement fund			
College fund			
Emergency fund			
MISCELLANEOUS			
Toiletries, household products			
Gifts/donations			
Grooming (hair, make-up, other)			
Miscellaneous expense			
Total			

Name: _____   Date: _____

Budget Template 2

Estimated Monthly Income	Income 1	
	Extra income	
	Total monthly income	

Actual Monthly Income	Income 1	
	Extra income	
	Total monthly income	

Estimated Balance (Estimated Income – Expenses)	
Actual Balance (Actual Income – Expenses)	
Difference (Actual – Estimated)	

Housing	Estimated Cost	Actual Cost	Difference
Mortgage/ rent			
Property tax			
Phone			
Cable			
Electricity			
Gas			
Water			
Maintenance			
Subtotal			

Transportation	Estimated Cost	Actual Cost	Difference
Vehicle payment			
Bus/taxi fare			
Gas			
Maintenance			
Other			
Subtotal			

Insurance	Estimated Cost	Actual Cost	Difference
Home			
Health			
Life			
Auto			
Subtotal			

Name: _____   Date: _____

Food	Estimated Cost	Actual Cost	Difference
Groceries			
Dining out			
Other			
Subtotal			

Pets	Estimated Cost	Actual Cost	Difference
Food			
Medical			
Grooming			
Toys			
Other			
Subtotal			

Personal Care	Estimated Cost	Actual Cost	Difference
Medical			
Hair/nails			
Clothing			
Dry cleaning			
Health club			
Organization fees			
Other			
Subtotal			

Entertainment	Estimated Cost	Actual Cost	Difference
Video/DVD/CD/MP3			
Movies			
Concerts			
Sporting events			
Live theatre			
Other			
Subtotal			

Loans	Estimated Cost	Actual Cost	Difference
Personal			
Student			
Credit card			
Subtotal			

Savings	Estimated Cost	Actual Cost	Difference
RRSP/retirement			
Savings account			
Other			
Subtotal			

TOTAL ESTIMATED COST	
TOTAL ACTUAL COST	
TOTAL DIFFERENCE	

Revised Budget Worksheet

Item	Cost ($)	Original Budget Opening Balance: _____ Remaining Income	Revised Budget Opening Balance: _____ Remaining Income

Name: _____   Date: _____

Life Changes That Affect a Budget

Life Changes That Affect a Budget

Chapter 2 Word Search

Use the terms in the box to solve the clues. Then, circle these words in the Word Search puzzle.

Note: Hyphens are not included in the puzzle.

balanced budget	budget	budget template	essential expenses
fixed expenses	FV	gross pay	living expenses
net pay	non-essential	PMT	PV
spreadsheet	TVM solver	variable expenses	

```
D  K  E  S  S  E  N  T  I  A  L  E  X  P  E  N  S  E  S  N
N  A  B  R  F  Q  B  A  L  A  N  C  E  D  B  U  D  G  E  T
O  L  X  V  I  M  O  E  H  Q  R  U  B  X  M  G  M  V  C  P
N  I  R  U  X  V  Q  Y  N  U  M  W  U  U  N  F  X  A  I  V
E  V  F  T  E  K  W  P  V  H  C  I  D  K  D  A  N  R  O  V
S  I  I  X  D  U  I  B  K  B  J  Z  G  M  C  D  S  I  Z  W
S  N  X  P  E  T  M  R  D  E  W  F  E  Y  B  U  P  A  Y  I
E  G  Q  N  X  U  P  X  J  F  A  S  T  X  P  I  R  B  R  J
N  E  B  E  P  C  M  I  T  U  Q  G  V  Y  T  N  E  L  M  P
T  X  A  T  E  Z  T  H  U  K  X  P  E  V  Z  T  A  E  B  F
I  P  D  P  N  O  J  Q  B  S  C  C  B  W  K  V  D  E  S  X
A  E  I  A  S  B  V  N  M  M  H  L  R  P  H  M  S  X  I  C
L  N  C  Y  E  I  I  L  N  L  Z  M  Z  K  S  S  H  P  N  B
E  S  O  J  S  K  E  J  M  N  B  R  I  A  X  O  E  E  C  J
X  E  G  R  O  S  S  P  A  Y  Y  B  F  O  L  L  E  N  I  I
P  S  Z  Q  P  P  W  K  K  B  L  U  L  U  Z  V  T  S  J  B
E  B  U  D  G  E  T  T  E  M  P  L  A  T  E  E  O  E  U  L
N  S  O  T  S  U  E  D  F  V  F  Y  Z  G  T  R  Y  S  U  U
```

Clues

1. This is the term for costs that are paid at the same time each week or month. They are generally the same amount from payment to payment.

_____ (2 words)

2. This is a short form for "present value." _____

3. This is a short form for "payment." _____

4. This is a type of computer program in which you can enter and manipulate budget information. _____

5. This is a list of common sources of income and expenses.

_____ (2 words)

6. This is a short form for "future value." _____

7. These living costs are not optional. You need to make them in order to live.

_____ (2 words)

8. _____ (2 words) refers to the amount you receive in your paycheque after all deductions have been subtracted.

9. This refers to the things you buy in order to live. These costs are slightly different from what you need to spend in order to run a house.

_____ (2 words)

10. You can use this graphing calculator application to help you calculate how much to put away per month if you are saving for something special.

_____ (2 words)

Name: _____   Date: _____

11. A _____ is an organized income and spending plan.

12. Things that you don't have to buy, such as restaurant meals, are called

_____ expenses.

13. _____ (2 words) refers to your total earnings before any

deductions are taken off.

14. In this type of budget, the amount of money coming in equals the amount

of money going out. _____ (2 words)

15. _____ (2 words) are not always the same. They may

change from week to week or month to month.

BLM 2–10

Chapter 2 Test

1. Caleb wants to go to college in 2 years to study travel and tourism. He estimates he will need to save $3500. Calculate the amount Caleb needs to save from each paycheque if he is paid

    a) weekly   **b)** bi-weekly

2. a) State 2 common essential expenses.

    _____   _____

    b) State 2 common non-essential expenses.

    _____   _____

    c) State 2 common variable expenses.

    _____   _____

    d) State 2 common fixed expenses.

    _____   _____

3. a) Kyla is saving $150 per month for a down payment on a car. Her account pays 2.5% interest per year, compounded monthly. In approximately how many months will she have $3500 saved?

    N: _____ **, I%:** _____ **, PV:** _____ **, PMT:** _____ **,**

    FV: _____ **, P/Y:** _____ **, C/Y:** _____ **, PMT: END   BEGIN**

    Length of time to save: _____.

    b) If she wants to have the money saved in 18 months, how much does she need to save each month?

    N: _____ **, I%:** _____ **, PV:** _____ **, PMT:** _____ **,**

    FV: _____ **, P/Y:** _____ **, C/Y:** _____ **, PMT: END   BEGIN**

    Amount to save each month: _____.

4. Jamal works part-time after school and on Saturdays. His monthly budget for November is shown.

Income ($)		Expenses ($)			
Nov 1–7	178.81	Car insurance	127	Clothes	70
Nov 8–14	180.31	Savings account	100	Cell phone	70
Nov 15–21	170.50	Gas	100	Misc.	50
Nov 22–28	173.62	Spending money	100	Lunches	85
Total Income =		**Total Expenses =**			
Balance (Income − Expenses)					

a) What is Jamal's total income for November? $_____

b) What are his total expenses? $_____

c) Calculate his monthly balance. $_____

d) Is this budget balanced? _____ Explain._____

_____

e) Jamal's hours at work have been cut. He will lose about $70 per week. Estimate his income for next month if it's a 5-pay month.

$_____

f) Change the amount spent on each item in Jamal's budget as necessary to create a balanced budget for December.

Item	Cost ($)	Opening Balance: _____ Remaining Income

Name: _____ Date: _____

Chapter 2 Task

Use this worksheet to help you with the Task on page 82 of the student resource.

1. Use this table to help you with #1 on page 82 of the student resource.

Item	Cost ($)	Opening Balance: _____ Remaining Income

2. Make 2 suggestions that might help Terry improve his financial position.

_____

_____

- Six months later, Terry buys a new home entertainment centre. He adds $1700 to his loan to pay for it.
- Terry's loan is now $10 500.
- Terry is planning a golf vacation in Myrtle Beach, South Carolina, with his friends. He estimates it will cost about $1000.
- Two weeks after returning from the trip to Myrtle Beach, Terry's account manager from the bank calls to discuss his finances. Terry's loan is now up to $12 000. He must pay the bank approximately $250 per month for the next 5 years to pay off the debt.

3. Create a balanced budget for Terry. Start with the essential expenses. Eliminate any of the non-essential items that you feel are unnecessary, in order to balance the budget.

Item	Cost ($)	Opening Balance: ____ Remaining Income

4. Explain to Terry how selling his house may help him in the future. Also, suggest to Terry why he may wish to purchase a used car and not lease a vehicle.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Name: _____   Date: _____

Chapter 2 Task Rubric

Category	Level 1 (50–59%)	Level 2 (60–69%)	Level 3 (70–79%)	Level 4 (80–100%)
• *Knowledge and Understanding* (B.1.4, B.2.1, B.2.2, B.2.4, B.2.6)				
	With limited accuracy	**With some accuracy**	**With considerable accuracy**	**With a high degree of accuracy**
• identifies essential expenses	☐	☐	☐	☐
• identifies non-essential expenses	☐	☐	☐	☐
• calculates amount remaining	☐	☐	☐	☐
• *Thinking* (A.1.8, B.2.3, B.2.4, B.2.6)				
	With limited effectiveness	**With some effectiveness**	**With considerable effectiveness**	**With a high degree of effectiveness**
• makes convincing arguments	☐	☐	☐	☐
• balances a budget	☐	☐	☐	☐
• makes changes and rebalances budget	☐	☐	☐	☐
• *Communication* (A.1.8, B.1.4, B.2.1, B.2.2, B.2.3, B.2.4, B.2.6)				
• uses conventions (e.g., use of dollar signs, money to 2 decimal places)	☐	☐	☐	☐
• uses vocabulary and terminology	☐	☐	☐	☐
• expresses and organizes mathematical thinking	☐	☐	☐	☐
• *Application* (A.1.8, B.1.4, B.2.1, B.2.2, B.2.3, B.2.4, B.2.6)				
• transfers knowledge and skills to new contexts	☐	☐	☐	☐
• makes connections between various concepts	☐	☐	☐	☐

BLM Answers

BLM 2–1 Practice Using the TVM Solver

1. **a)** payment; $495.52
   b) number of months; 9.3 months
2. $3099.81
3. **a)** 14.85 months
   b) 14.90 months
   c) $317.05
   d) $315.36
4. **a)** 13.02 months
   b) 13.04 months
   c) $174.84
   d) $228.49

BLM 2–3 Practice With Spreadsheets

2. Answers are in italics.

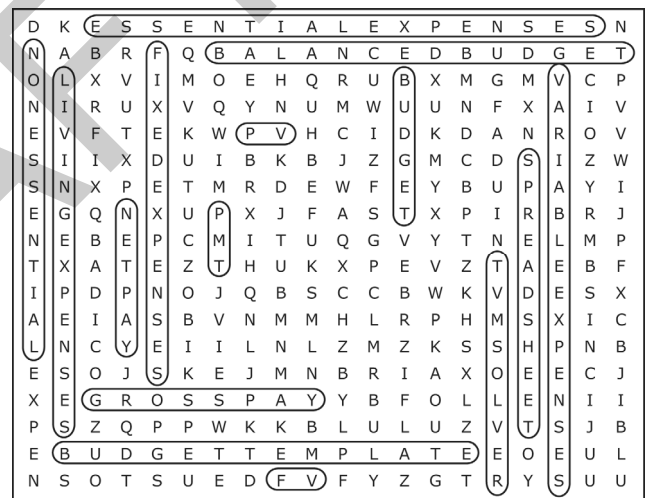| Week of	Oct. 31–Nov. 6	Nov. 7–Nov. 13	Nov. 14–Nov. 20	Nov. 21–Nov. 27	
Item	**Amount ($)**				**Total**
Rent	400.00				*400.00*
Groceries	101.00	124.84	83.68	95.21	*404.73*
Phone and cable		103.25			*103.25*
Bus pass	94.00				*94.00*
Going out	51.25	32.14	79.24	67.00	*229.63*
Savings	40.00	40.00	60.00	50.00	*190.00*
Total	*686.25*	*300.23*	*222.92*	*212.21*	*1421.61*

3.

Amount Spent Each Week
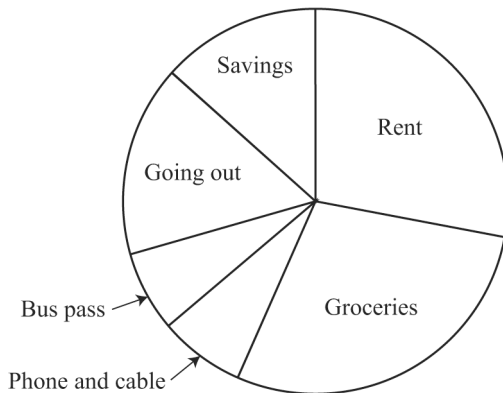
4.
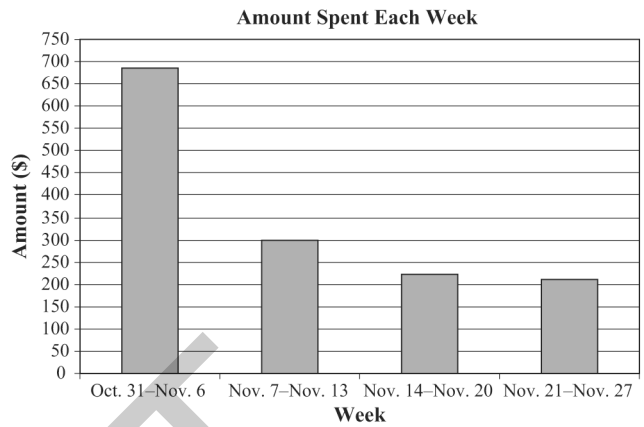
BLM 2–9 Chapter 2 Word Search

1. fixed expenses
2. PV
3. PMT
4. spreadsheet
5. budget template
6. FV
7. essential expenses
8. net pay
9. living expenses
10. TVM solver
11. budget
12. non-essential
13. gross pay
14. balanced budget
15. variable expenses

BLM 2–10 Chapter 2 Test

1. a) $67.31
   b) $134.62
2. Answers will vary. Examples are provided.
   a) rent; groceries
   b) entertainment; cable
   c) phone; spending money
   d) car payments; insurance
3. a) 22.8 months
   b) $191.02
4. a) $703.24
   b) $702.00
   c) $1.24
   d) A budget is balanced when the income is equal to the expenses.
   e) $500
   f) Answers will vary. The budget should balance at the end, and fixed expenses should not be changed. An example is provided.

Item	Cost ($)	Opening Balance: $500 Remaining Income
Car insurance	127	373
Savings account	50	325
Gas	80	243
Spending money	80	163
Clothes	30	133
Cell phone	50	83
Misc.	30	53
Lunches	50	3

BLM 2–11 Chapter 2 Task

1. Answers will vary. At the end of the month Terry should be in debt.
2. Answers will vary. Possible responses include that Terry should sell his golf membership and/or his house, and/or get a part-time job to help him make more money.
3. Answers will vary. An example is provided.

Item	Cost ($)	Opening Balance: $4123 Remaining Income
Mortgage	1600	2523
Child support	1250	1273
House insurance	85	1188
Car insurance	113	1075
Car lease	245	830
Bank loan	250	580
Groceries	400	180
Utilities	180	0

4. Answers will vary. Possible responses include: Terry cannot afford his mortgage. It is about 39% of his net pay. If he sells his house and moves into a cheaper home, his rent will be less. Also, if he sells his house, he might make some money. He can use this money to help pay off his bank loan. If Terry buys a used car, he will have smaller car payments. Alternatively, he could use the money from selling his house to buy the car so that he does not have any car payments.