

# 2 Budgets



Chapter  
2

1. Why can't the boy on the right go to the movie?

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2. How could this situation be avoided?

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### Tech Tip: Using the TVM Solver

Since these calculations involve money, turn on the graphing calculator and press **MODE**,  $\downarrow \rightarrow \rightarrow \rightarrow$ , **ENTER** to set all calculations to 2 decimal places.

Press **APPS**, **ENTER**, **ENTER** to access the TVM solver.

```
N=0.00
I%=0.00
PV=0.00
PMT=0.00
FV=0.00
P/Y=1.00
C/Y=1.00
PMT: [END] BEGIN
```

#### Example 1:

Esteban and Suzanne want to take their sons on a vacation to Florida in 1 year. They estimate the trip will cost \$2500. They have an account that pays 3% interest per year, compounded monthly. Determine the amount they will need to deposit into the account at the end of each month to reach their goal.

- N is the number of payments, so  $N = \underline{\hspace{2cm}}$ .
- I% is the interest rate in percent, so  $I\% = \underline{\hspace{2cm}}$ .
- PV is the Present Value (or the amount today), so  $PV = \underline{\hspace{2cm}}$ .
- PMT stands for Payment. PMT is the number we want to calculate, so for now, let  $PMT = 0$ .
- FV is the  $\underline{\hspace{2cm}}$ , so  $FV = \underline{\hspace{2cm}}$ .
- P/Y is for payments per year, so  $P/Y = \underline{\hspace{2cm}}$ .
- C/Y is the number of times the interest is compounded in 1 year, so  $C/Y = \underline{\hspace{2cm}}$ .
- The last line deals with when payments are made, so END needs to be highlighted. For all problems in this unit, payment will be made at the end of the pay period.

After you set all of the variables, the calculator does the work. Scroll up to PMT and press **ALPHA**, **ENTER**. This directs the calculator to SOLVE

for the payment.  $PMT = \$ \underline{\hspace{2cm}}$ .

Notice that the answer is negative. The TVM solver distinguishes between money received (+) and money given (-). The negative value makes sense since each payment is money that Esteban and Suzanne give up.

```
N=12.00
I%=3.00
PV=0.00
PMT=-205.48
FV=2500.00
P/Y=12.00
C/Y=12.00
PMT: [END] BEGIN
```

**Practice**

1. Jesse wants to have a party for his girlfriend's birthday in 6 weeks. He estimates it will cost him \$500 for snacks, drinks, and entertainment. His savings account pays 2% interest per year, compounded monthly. How much money does he need to save weekly?  $PMT = \$$  \_\_\_\_\_.

2. Tatiana wants to buy a surround-sound system for her TV. She wants it in time for her vacation, in 4 months. It costs \$1100. Her account pays 1.8% interest per year, compounded monthly. How much does she need to save each month?

```
N=0.00
I%=0.00
PV=0.00
PMT=0.00
FV=0.00
P/Y=1.00
C/Y=1.00
PMT: [ ] BEGIN
```

$PMT = \$$  \_\_\_\_\_.

**Example 2:**

Carrie and Bill want to build a deck and landscape their backyard. They estimate it will cost \$4000. Their account pays 2.5% interest per year, compounded monthly. They can afford to save \$325 per month.

```
■ N=12.17
I%=2.50
PV=0.00
PMT=-325.00
FV=4000.00
P/Y=12.00
C/Y=12.00
PMT: [ ] BEGIN
```

- N stands for \_\_\_\_\_ (skip for now)
- I% stands for \_\_\_\_\_, so I% = \_\_\_\_\_.
- PV stands for \_\_\_\_\_, so PV = \_\_\_\_\_.
- PMT stands for \_\_\_\_\_, so PMT = \_\_\_\_\_.
- FV stands for \_\_\_\_\_, so FV = \_\_\_\_\_.
- P/Y stands for \_\_\_\_\_, so P/Y = \_\_\_\_\_.
- C/Y stands for \_\_\_\_\_, so C/Y = \_\_\_\_\_.

**Practice**

3. a) How long will it take Carrie and Bill to save \$4000?  $N =$  \_\_\_\_\_.

b) What payment would they need to make if they already had \$1000 saved?  $PMT = \$$  \_\_\_\_\_.

c) If the interest rate is lowered to 1.4%, how long will it take?  $N =$  \_\_\_\_\_.

d) If the interest rate is 1.4% and they only have 8 months to save, how much would they need to save each month?

$PMT = \$$  \_\_\_\_\_.

## 2.1 Savings Plans

Focus: percent, using technology, planning, goal setting

### Warm Up

1. About how many days are in 6 months? \_\_\_\_\_

2. What is 10% of

a) 70? \_\_\_\_\_

b) 120? \_\_\_\_\_

3. How many pay periods are usually in 1 year if you are paid

a) weekly? \_\_\_\_\_

b) bi-weekly? \_\_\_\_\_

c) monthly? \_\_\_\_\_

4. What is 10% of

a) 238? \_\_\_\_\_

b) 119.20? \_\_\_\_\_

c) 473.92? \_\_\_\_\_

5. What do the following TVM solver abbreviations stand for?

a) PV \_\_\_\_\_

b) FV \_\_\_\_\_

6. Explain the difference between the 2 variables in #5.

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### Planning for the Future

- Long-term financial goals help you manage your money.
- You need to plan ahead to buy a house, go on vacation, get out of debt, or go back to school.

1. a) What are your financial goals in the next 5 years?

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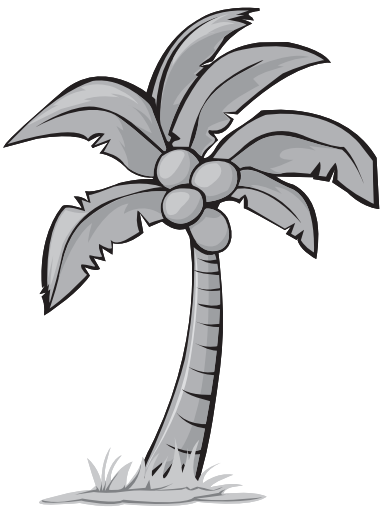
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b) What major purchases do you see in your future?

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**c)** Investigate the cost of 1 of these goals or purchases.

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**d)** List the steps you could start taking right now to reach this goal.

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**e)** Compare your goals and plans with a partner.

**2.** Jaspreet is saving for a vacation to Halifax with her friends. She puts \$2 a day into a glass jar on her night table.



**a)** Approximately how much will Jaspreet save in 30 days?

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**b)** Approximately how much will she save in 6 months?

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**c)** How much will she have in 1 year?

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**d)** State 1 advantage and 1 disadvantage of Jaspreet's savings method.

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**3.** Jasira is going to college next year to study culinary arts. She has 1 year to save \$3000. Calculate the amount she needs to save from each paycheque if she is paid

**a)** weekly \_\_\_\_\_

**b)** bi-weekly \_\_\_\_\_

**c)** monthly \_\_\_\_\_



4. Caleb needs to buy snow tires for his truck. They will cost \$1000.

a) If he saves \$120 each week, will he have enough to buy the tires in 6 weeks?

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b) How much will Caleb have to save each week in order to buy the snow tires in 6 weeks?

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5. In 9 months, Rob wants to purchase a \$1200 snowboard. He has an account that pays 2.5% interest per year, compounded monthly. Use a TVM solver to determine how much he should put in the account each month.

**N:** \_\_\_\_\_, **I%:** \_\_\_\_\_, **PV:** \_\_\_\_\_, **PMT:** \_\_\_\_\_,  
**FV:** \_\_\_\_\_, **P/Y:** \_\_\_\_\_, **C/Y:** \_\_\_\_\_, **PMT: END BEGIN**

6. a) Find an article about financial planning on the Internet or in a print resource. Read the article.

b) Describe the attitude of the author toward financial planning.

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c) How does the author use statistics to promote the ideas in the article?

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Go to pages 45–50 to write the definitions for **gross pay** and **net pay** in your own words.

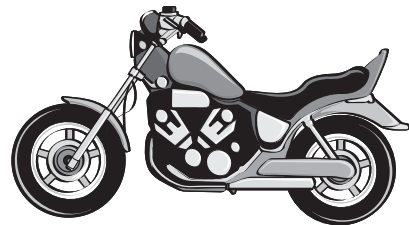
- **Gross pay** is an employee's total earnings before deductions, such as income tax, are taken off. An employee who makes \$9.50/h and works 10 hours has a gross pay of \$95.
- **Net pay** is gross pay after all deductions are taken off.

7. Last spring, Rhys started working after school. The table shows the amounts of his first 4 paycheques.

Pay Date	Net Pay	Amount Saved
March 17	\$212.98	\$21.30
March 31	\$244.30	
April 14	\$192.09	
April 28	\$263.87	

- a) Rhys saved 10% of his net pay. Calculate the amount he saved from each paycheque. Write your answers in the chart. The first one is done for you.
- b) Estimate the average amount Rhys can save each month.

- c) Rhys is saving for a \$1500 motorcycle. Use a TVM solver to determine how many months it will take him to reach his goal. He has an account that earns 2% interest, compounded monthly.



**N:** \_\_\_\_\_, **I%:** \_\_\_\_\_, **PV:** \_\_\_\_\_, **PMT:** \_\_\_\_\_,  
**FV:** \_\_\_\_\_, **P/Y:** \_\_\_\_\_, **C/Y:** \_\_\_\_\_, **PMT: END BEGIN**

### **✓ Check Your Understanding**

1. Jackson works part-time and earns about \$450 every 2 weeks. He wants to buy a \$6000 motorcycle. Design a savings plan for Jackson. He wants to buy his motorcycle within 1 year.

**N:** \_\_\_\_\_, **I%:** \_\_\_\_\_, **PV:** \_\_\_\_\_, **PMT:** \_\_\_\_\_,  
**FV:** \_\_\_\_\_, **P/Y:** \_\_\_\_\_, **C/Y:** \_\_\_\_\_, **PMT: END BEGIN**

## 2.2 Slicing Up the Pie

Focus: number sense, proportional reasoning, interpreting and displaying data

### Warm Up

**1.** Solve without a calculator.

**a)** 40 is what percent of 80? \_\_\_\_\_

**b)** 20 is what percent of 80? \_\_\_\_\_

**c)** 10 is what percent of 80? \_\_\_\_\_

**d)** 50 is what percent of 80? \_\_\_\_\_

**2.** Complete the chart.

Fraction	Percent	Decimal
$\frac{9}{10}$		
	35%	
		0.08

**3.** Solve without a calculator.

**a)** 22% of \$100 \_\_\_\_\_

**b)** 22% of \$200 \_\_\_\_\_

**c)** 22% of \$300 \_\_\_\_\_

**4.** What is 10% of

**a)** \$212.60? \_\_\_\_\_

**b)** \$348.71? \_\_\_\_\_

**5.** An employee being paid bi-weekly receives \_\_\_\_\_ or \_\_\_\_\_ pays per month.

**6.** Explain why there are 2 possible answers for #5.

\_\_\_\_\_

\_\_\_\_\_

### Managing Your Money



- Many people spend more time planning a party than managing their money.
- Whether you rent a basement apartment or own a large house, you can predict and manage most of your income and many of your expenses.

**1.** Brainstorm some household and living expenses you or your family might pay in a typical month.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



- **Essential expenses** are not optional. These include such things as groceries.
- **Non-essential expenses** are optional. Going to the movies or out to dinner is a non-essential expense.

Go to pages 45–50 to write the definitions for **essential expense** and **non-essential expense** in your own words. Give an example of each.

2. Classify your list of expenses from #1 as either essential or non-essential.

Essential Expenses		Non-Essential Expenses	

- **Fixed expenses** are paid at the same time each week or each month. They are generally the same amount from payment to payment.
- **Variable expenses** are expenses that can change in their frequency or their amount.

Go to pages 45–50 to write the definitions for **fixed expenses** and **variable expenses** in your own words. Give an example of each.

3. Classify your list of expenses from #1 as either fixed or variable.

Fixed Expenses		Variable Expenses	

- 4.** Dylan graduated from high school last year and works full-time at a job that pays \$11.25/h. He lives with his parents. He drives his own car, which will be paid in full in about 1 year.
- Assuming he works 40 hours per week, calculate Dylan's bi-weekly gross income.
  - Dylan's net earnings are about 85% of his gross earnings. What is his approximate bi-weekly net pay?
  - Dylan saves 10% of his net pay in a long-term savings account. How much does he put into the account each pay?
  - Estimate the amount that he will deposit into this account in 1 year.
  - Most months, Dylan's total take-home pay is \$ \_\_\_\_\_.
  - Some months, his total take-home pay is \$ \_\_\_\_\_.
  - Dylan pays his parents \$300 per month to help with household expenses. In a 2-pay month, \$300 is approximately \_\_\_\_\_% of Dylan's net earnings.
  - In a 3-pay month, \$300 is approximately \_\_\_\_\_% of his net earnings.
  - List Dylan's possible car-related expenses. Circle the fixed expenses.

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- A **budget** is an organized income and spending plan.

Go to pages 45–50 to write the definition for **budget** in your own words.

5. a) Hafeeza lives with her young son. Her monthly expenses are listed in the chart below. Determine the percent of her total income for each expense. Round all calculations to the nearest percent.

Item	Amount (\$)	Calculation	Percent of Income
Rent	635		
Food	250		
Daycare	300		
Savings	100		
Phone	50		
Car loan	115		
Car insurance	105		
Gas & other car expenses	180		
Gifts, charities	50		
Vacation fund	50		
Clothing	100		
Entertainment	75		
<b>Total</b>			

- b) Circle the non-essential items in Hafeeza’s budget. Draw a rectangle around the fixed items.
- c) What is the total amount budgeted for essential items? \$\_\_\_\_\_ variable items? \$\_\_\_\_\_
- d) Hafeeza is planning a trip with her son to Montreal to visit family. She estimates the vacation will cost \$1000. If she starts the vacation fund today, when will she have enough saved?

6. Kaylee works part-time after school and on weekends. She earns \$120 per week. She is learning how to manage her money by tracking her expenses.
- a) Determine Kaylee's total expenses for each week in October. Then, calculate the total of each item for all 4 weeks.

Week of →	October 1-7	October 8-14	October 15-21	October 22-28	
Item ↓	Amount (\$)				Total
Lunches	25.00	20.00	19.00	23.00	
Clothes		32.75		45.60	
Mom	20.00	20.00	20.00	20.00	
Going out	18.00	12.00	35.00	32.00	
Phone			44.30		
Miscellaneous	17.54	16.00	20.00	13.50	
Saving	39.46	19.25	-18.30	-3.50	
<b>Total</b>					

- b) Explain the negative amounts in Kaylee's savings.

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- c) Explain "Miscellaneous."

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- d) Make 3 suggestions that Kaylee can use in November to improve her situation.

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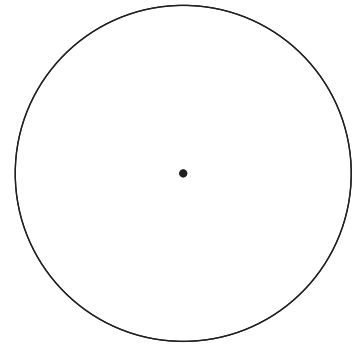
- e) Determine the average amount spent each week for each category. Then, determine the percent of Kaylee's total income spent in each category. Round calculations to the nearest percent.

To find the weekly average, divide the 4-week total by 4.



Item	4-Week Total	Weekly Average	Percent of Total Income
Lunches			
Clothes			
Mom			
Going out			
Phone			
Miscellaneous			
Savings			

- f) Some people prefer to see data in a graph. Create a circle graph showing the Percent of Total Income column. Estimate the size of each pie slice.
- g) Use the Tech Tip on pages 52–53 to create a spreadsheet that displays Kaylee's expenses on a circle graph. Compare the accuracy of your sketch to the graph created by the computer.



## ✓ Check Your Understanding

- You have organized Kaylee's budget information in several ways.
  - How can a circle graph help you interpret how you spend your money? \_\_\_\_\_  
\_\_\_\_\_
  - How can a spreadsheet help you interpret how you spend your money? \_\_\_\_\_  
\_\_\_\_\_



## Tech Tip: Using a Spreadsheet

The following instructions are for use with Microsoft Excel. Other spreadsheet programs will use similar commands.

1. Open the program so that a blank sheet appears.
2. In this Tech Tip, you will use the data in #6 on pages 62–63.
  - a) Type “Week of” in cell A1. Press **Tab** to move 1 cell to the right (to B1). Type “Oct 1–7,” press **Tab**, and continue entering the rest of the data in that row.
  - b) Press **Enter** and you should move directly to cell A2. Otherwise, move the cursor to A2. You can leave out the “Item, Amount, Total” row. Enter the rest of the data. Enter 0 where you see blanks to indicate no spending.
3. Your spreadsheet should now look like this.

Save your work.

	A	B	C	D	E	F	G	H	I
1	Week of	Oct 1-7	Oct 8-14	Oct 15-21	Oct 22-28				
2	Lunches	\$25.00	\$20.00	\$19.00	\$23.00				
3	Clothes	\$0.00	\$32.75	\$0.00	\$45.60				
4	Mom	\$20.00	\$20.00	\$20.00	\$20.00				
5	Going out	\$18.00	\$12.00	\$35.00	\$32.00				
6	Phone	\$0.00	\$0.00	\$44.30	\$0.00				
7	Misc.	\$17.54	\$16.00	\$20.00	\$13.50				
8	Savings	\$39.46	\$19.25	-\$18.30	-\$3.50				
9									
10									

- a) Bring the cursor above the letter B. The plus-sign cursor should change to a downward pointing arrow. Click and drag to highlight columns B through F.


- b)** Right click, select **Format Cells**, and click on **Currency**. Make sure that Decimal places is 2 and the Symbol is \$. Click **OK**. Your spreadsheet will now display the data as money values.

 Save

- 4. a)** Click on cell **B9**. Click on the  $\Sigma$  symbol in the top toolbar. The cells B1 to B8 should be highlighted. Press **Enter**. \$120.00 should appear in B9.

Alternatively, click and drag to highlight the cells you wish to add, and then click  $\Sigma$ .

- b)** Program the spreadsheet to total the data on the rows *and* columns so that there are appropriate values in cells C9 to E9 and cells F2 to F8.
- c)** Program F9 to total the cells above it or to its left. \$480.00 should appear.



Some spreadsheet programs will show a small triangle in the top corner of the cell. This shows you that the cell has been programmed for a specific function.

- 5.** To create a circle graph, click and drag to highlight cells A2 to A8. Hold the **Ctrl** key while you highlight cells F2 to F8.

- 6. a)** Click **Insert** and select **Pie** or **Chart**. Select the first option under 2-D Pie.

- b)** Click anywhere on the graph to highlight. Click **Layout**, **Data Labels**, **More Data Label Options**. Select the options of your choice. Try different displays or combinations. Print your finished graph.

- 7.** Click on **Sheet 2** and create a circle graph with the following data.

- a)** In A1 type "Month." In A2 to A13 type the months of the year in order.
- b)** In B1 type "Gasoline." In B2 to B13 enter \$75, \$66, \$112, \$90, \$123, \$109, \$265, \$134, \$122, \$180, \$105, \$127.
- c)** Try other displays, for example, a bar graph or a line graph. Look at the displays of other students. Which display do you like best for this type of data? \_\_\_\_\_

 Save

## 2.3 Track Your Spending

Focus: planning, goal setting, number sense, interpreting and displaying data

### Warm Up

**1.** You have been keeping track of your spending for several weeks. How much did you spend on entertainment?

\_\_\_\_\_

\_\_\_\_\_

**2.** What forms of entertainment did you spend money on?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3.** What is an advantage to tracking your expenses?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**4.** Add.

**a)**  $\$134 + \$26 = \$$  \_\_\_\_\_

**b)**  $\$21 + \$72 = \$$  \_\_\_\_\_

**c)**  $\$56 + \$29 = \$$  \_\_\_\_\_

### Analysing Your Data

- Now that you have been tracking your spending, you should have a good understanding of how you spend your money.

**1.** Look at your budget tracker.

**a)** List the essential items you have purchased.

\_\_\_\_\_

**b)** List the non-essential items you have purchased.

\_\_\_\_\_

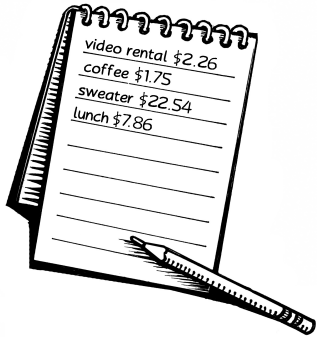
**2.** Discuss your list with several peers.

**a)** What items do you consider essential that one of the others considers non-essential?

\_\_\_\_\_

**b)** What items do you consider non-essential that one of the others considers essential?

\_\_\_\_\_





3. a) What regular payments do you make?

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b) Which of these are fixed?

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c) Which of these are variable?

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- Many people group their expenses by category.
- Housing, transportation, and food make up the largest amount of many budgets.
- Some people think that clothing, entertainment, and gifts are even more important.
- Create a number of categories to group similar items that you spent money on. Refer back to Section 2.2 for some additional examples.



4. Determine the total spent for each category. Use the table below as an organizer.

Week of						
Category	Amount (\$)					Total
<b>Total</b>						

- 5. a) Enter the data from the table in a spreadsheet.
- b) Program the spreadsheet to calculate all totals.
- c) Create a circle graph showing the percent value of each category.
- d) Print and attach a copy of the circle graph.

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- e) Looking at this graph, are there areas where you might reduce your spending? List them.

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- f) Are there areas where you would like to increase your spending?

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- 6. a) Have you identified any spending patterns that you would like to change?

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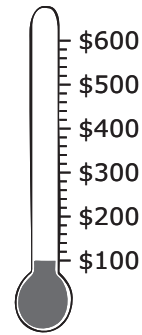
- b) State 3 things that you will do during the next month to improve your financial situation.

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- Many people make changes to their budget when they are saving for something important.
- Keeping a visual reminder of how much they have saved helps some people keep saving.



Goal: Fly to the Dominican Republic

**7. a)** You want to make a large purchase. Perhaps you want to buy a stereo system. Maybe you want to take a vacation in the Caribbean or visit family in another country. Research the cost of that purchase.

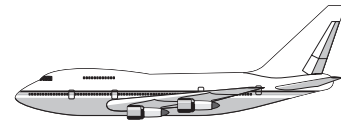
\_\_\_\_\_

**b)** How could you change your spending habits to allow you to save for that goal?

\_\_\_\_\_

**c)** How much could you save each month by taking the actions in part b)? \_\_\_\_\_

**d)** Predict how long it will take you to reach your goal. \_\_\_\_\_



**8. a)** With your goal in mind, set up a spreadsheet or paper template to track next month's expenses.

**b)** What is your goal?

\_\_\_\_\_

**c)** What steps do you plan to take in the next month to help reach it?

\_\_\_\_\_

### ☑ Check Your Understanding

**1.** Re-assess your budget in a month. Did you accomplish what you planned in #7b)? \_\_\_\_\_

**2.** What changes could you make to help you achieve your goal in the next month? \_\_\_\_\_

\_\_\_\_\_

## 2.4 Living Expenses

Focus: number sense, income versus expenses

Warm Up	
<p><b>1.</b> An employee is paid weekly and was last paid April 6. When are the next 2 paydayes?</p>	<p><b>2.</b> An employee is paid bi-weekly and was last paid April 6. When are the next 2 paydayes?</p>
<p><b>3.</b> Round to the nearest \$10.</p> <p><b>a)</b> \$128.75 _____</p> <p><b>b)</b> \$62.45 _____</p> <p><b>c)</b> \$206.90 _____</p>	<p><b>4.</b> Add the rounded values from #3.</p>
<p><b>5.</b> State 2 common fixed living expenses.</p> <p>_____</p> <p>_____</p>	<p><b>6.</b> State 2 common variable living expenses.</p> <p>_____</p> <p>_____</p>

### Using Your Budget Template

- The car. The kids. Groceries. Saving for a house. Taking care of your living expenses doesn't have to be overwhelming.
- You need to keep track of what money comes in and manage what money goes out.
- Save some of what you make. Invest some. Give some away.

1. One way of organizing your expenses is to use a **budget template**. This is a list of common sources of income and expenses. You can get them from banks, financial planners, or the Internet.
  - a) Go to [www.mcgrawhill.ca/books/workplace12](http://www.mcgrawhill.ca/books/workplace12) and follow the links to budgeting. Look at 2 different budget templates. Choose a template that looks easy to use.
  - b) Look at the templates collected by classmates. Discuss why each of you chose the template that you did.

Go to pages 45–50 to write the definition for **budget template** in your own words.

2. Below is a list of expenses from a typical budget template.

Home	Daily Living	Transportation	Entertainment
Mortgage/rent	Groceries	Car payments	Cable or satellite TV
Utilities	Child care	Fuel	Video/DVD rentals
Home/cell phone	Dry cleaning	Insurance	Movies/plays
Internet	Dining out	Repairs	Concerts/clubs
Home repairs	Housecleaning	Car wash	Books
Home decorating	Clothing	Parking	Music: MP3s, CDs, etc.
Home security	Gifts	Public transit	
Garden supplies	Salon/barber/stylist		
Property tax	Credit card/loan payments		
Health and Recreation	Vacations	Saving/ Investing	Dues/ Subscriptions
Club/team/gym memberships	Travel: bus, car, plane, train	Savings accounts	Magazines
Insurance	Accommodations	RRSP	Newspapers
Prescriptions	Food	RESP	Religious organizations
Over-the-counter drugs	Souvenirs	Stocks	Charity
Veterinarians/pet medicines	Child/pet care	Other investments	
Life insurance			
Sports equipment			
Toys/child gear			

- Circle the items that apply to you now.
- Draw a rectangle around the items that might apply to you next year.
- Highlight 5 essential and 5 non-essential expenses.
- Use different colours to highlight 5 fixed expenses and 5 variable expenses.

3. Stephanie works part-time after school and some weekends. Her monthly budget for February is shown.

Income (\$)		Expenses (\$)			
Feb 2–16	312.61	Save for college	200	Clothes	95
Feb 17–Mar 3	290.09	Room and board	160	Cell phone	20
		Spending money	100		
<b>Total Income =</b>		<b>Total Expenses =</b>			
Balance (Income – Expenses) =					

- a) What is Stephanie's total income? \$ \_\_\_\_\_
- b) What are her total expenses? \$ \_\_\_\_\_
- c) Determine Stephanie's balance. \$ \_\_\_\_\_
- d) Explain the meaning of her monthly balance.

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4. Mario moved out of his parents' house into a 2-bedroom apartment 4 months ago. He has recorded some of his expenses on a piece of paper.

	<i>Jan 1 - first and last months' rent - \$1180</i>
<input type="radio"/>	<i>Jan 7 - activate cable - \$65</i>
	<i>Jan 19 - top up cell phone - \$40</i>
	<i>Feb 1 - rent - \$590</i>
	<i>Feb 18 - gas bill - \$117.40</i>
	<i>Feb 22 - hydro bill - \$86.23</i>
<input type="radio"/>	<i>Mar 1 - rent - \$590</i>
	<i>Mar 11 - cable bill - \$103.06</i>
	<i>Mar 18 - gas bill - \$123.64</i>
	<i>Mar 29 - top up cell phone - \$50</i>
	<i>Apr 1 - rent - \$590</i>
<input type="radio"/>	<i>Apr 18 - gas bill - \$93.68</i>
	<i>Apr 22 - hydro bill - \$92.91</i>

a) Total Mario's expenses by month and by item.

Month (\$)		Item (\$)	
<b>Jan</b>	$1180 + 65 + 40 = \underline{\hspace{2cm}}$	<b>Rent</b>	$1180 + 590 + 590 + 590 = \underline{\hspace{2cm}}$
<b>Feb</b>		<b>Cable</b>	
<b>Mar</b>		<b>Cell phone</b>	
<b>Apr</b>		<b>Gas</b>	
		<b>Hydro</b>	

b) Which expenses do you think will decrease over the next few months? Explain your answer.

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Which expenses will change between winter and spring?

c) Look at your budget template or the one on page 71. List expenses that Mario has left out of his budget.

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d) If 1 month's rent should not exceed 1 week's net income, approximate the minimum weekly net income that Mario needs in order to be able to afford to live in this apartment.

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## ✓ Check Your Understanding

1. a) Create a list of living expenses that a couple with a baby would have that a couple living alone would not.

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b) Suggest ways the couple might adjust their budget to pay for these extra expenses.

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## 2.5 Managing Change

Focus: number sense, balancing a budget

### Warm Up

<p><b>1.</b> George earns \$14.50/h and works 36 hours per week. What is his bi-weekly gross income?</p>	<p><b>2.</b> If George's net income is 80% of his gross income, what is his bi-weekly net income?</p>
<p><b>3.</b> If George's monthly expenses are \$1450, what is his balance in a 2-pay month?</p>	<p><b>4.</b> How much money do you think George should save each month? Why?</p> <p>_____</p> <p>_____</p>

### Developing a Balanced Budget

- A budget is **balanced** when the money coming in equals the money going out. The money going out can include savings and investments.

- 1. a)** Luca is in grade 12 and works part-time after school. His weekly earnings average \$125. Write each week's earnings in the Income column below.

Income (\$)	Expenses (approximate \$)	
<b>Total Income =</b>	<b>Total Expenses =</b>	
<b>Monthly Balance (Income – Expenses) =</b>		

- b)** Each month, Luca saves \$200. His car is paid for. His car insurance costs about \$125. He spends about \$75 on gas and about \$100 on entertainment. Write the data in the Expenses column.

Go to pages 45–50 to write the definition for **balanced budget** in your own words.



- c) Complete the last 2 rows of the table for Luca’s balance.
- d) Luca’s budget is BALANCED/NOT BALANCED because his \_\_\_\_\_ equals his \_\_\_\_\_.

- Bill is a single, 28-year-old man.
- He has a full-time job with regular bi-weekly take home pay of about \$750.
- He has income from a second job of about \$200 per month.
- He rents a 1-bedroom apartment for \$634 per month.
- He does not own a car and uses public transportation. A transit pass costs \$75 per month.
- Bill has a personal loan, which costs him \$238 monthly.
- He spends about \$100 per week in groceries.



Look at Section 2.4 or your budget tracker from Section 2.3.

2. a) In the table below, list other expenses that Bill might have. Estimate the monthly cost of each expense.
- b) Calculate Bill’s total income for a month in which he receives 2 pays from his full-time job \_\_\_\_\_.
- c) Balance Bill’s monthly budget. Keep a running total of his remaining income by deducting each expense from the total calculated in part b). How much does Bill have left for savings at the end of the month?

Item	Cost (\$)	Opening Balance: _____ Remaining Income (\$)
Rent	634	
Transit pass	75	
Loan		
Groceries		

- Bill is losing his part-time job at the end of the week.
- 3. a)** If next month is also a 2-pay month at his full-time job, calculate Bill's total income for next month

\_\_\_\_\_.

- b)** Which item(s) from the table in #2c) must stay the same?

\_\_\_\_\_

- c)** Which item(s) from the table in #2c) can change?

\_\_\_\_\_

- d)** Design a balanced budget for Bill's reduced income.

Item	Cost (\$)	Opening Balance: _____ Remaining Income (\$)
Rent	634	
Transit pass	75	
Loan		
Groceries		

- e)** If Bill's financial situation remains the same for a few months, what other decisions might he have to make to keep his budget balanced?

\_\_\_\_\_

\_\_\_\_\_

- It's now 6 months later and Bill has a new job.
- His hourly rate is \$16.50.
- He works 40 hours per week and takes home approximately 80% of his gross income.

4. a) Calculate Bill's new weekly net income \_\_\_\_\_.
- b) Calculate his monthly net income for a 4-pay month and for a 5-pay month \_\_\_\_\_.
- c) If there is money left over after paying for all of his monthly expenses, what could Bill do? Prioritize your choices. \_\_\_\_\_  
\_\_\_\_\_
- d) Design a balanced budget for Bill with the information you know for a 4-pay month. Include the same items as you did in #2c). Feel free to add new items.

Item	Cost (\$)	Opening Balance: _____ Remaining Income (\$)
Rent	634	
Transit pass	75	
Loan		
Groceries		

### Check Your Understanding

1. Brainstorm some life changes that could affect a budget. Describe how you would adjust the budget for each life change.

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## Chapter 2 Review

1. Martin wants to go to college in 1 year to study landscaping design. He needs to save \$2500. Calculate the amount Martin needs to save from each paycheque if he is paid
- a) weekly    b) bi-weekly

2. a) Tanika and Avi are saving \$400 per month for a down payment on a house. They have an account that pays 3% interest per year, compounded monthly. In approximately how many months will they have \$8000 saved?

N: \_\_\_\_\_, I%: \_\_\_\_\_, PV: \_\_\_\_\_, PMT: \_\_\_\_\_,

FV: \_\_\_\_\_, P/Y: \_\_\_\_\_, C/Y: \_\_\_\_\_, PMT: END BEGIN

- b) If Avi and Tanika wanted to have the \$8000 down payment saved in exactly 1 year, how much would they need to save each month?

N: \_\_\_\_\_, I%: \_\_\_\_\_, PV: \_\_\_\_\_, PMT: \_\_\_\_\_,

FV: \_\_\_\_\_, P/Y: \_\_\_\_\_, C/Y: \_\_\_\_\_, PMT: END BEGIN

3. a) State 2 common fixed expenses.

\_\_\_\_\_

- b) State 2 common variable expenses.

\_\_\_\_\_

- c) State 2 common non-essential expenses.

\_\_\_\_\_

- d) State 2 common essential expenses.

\_\_\_\_\_

4. Marina works part-time after school and some weekends. Her monthly budget for April is shown.

Income (\$)		Expenses (\$)			
Apr 2–16	164.55	Save for own car	100	Clothes	50
Apr 17–May 1	182.09	Spending money	75	Cell phone	20
		Car insurance	40	Gas	40
<b>Total Income =</b>		<b>Total Expenses =</b>			
<b>Balance (Income – Expenses) =</b>					

- a) What is Marina’s total income for April? \$ \_\_\_\_\_
- b) What are her total expenses? \$ \_\_\_\_\_
- c) Calculate her monthly balance. \$ \_\_\_\_\_
- d) Explain what is meant by having a balanced budget.

\_\_\_\_\_

\_\_\_\_\_

- e) Marina’s hours at work have been cut. She expects to lose about half of her monthly income. Estimate her income for May.

\$ \_\_\_\_\_

- f) Change Marina’s budget to create a balanced budget for May.

Item	Cost	Remaining Income



## Chapter 2 Practice Test

1. Karina plans to attend a community college in 1 year to study culinary arts. She thinks that she will need to save \$4000. Calculate the amount Karina needs to save from each paycheque if she is paid

a) bi-weekly

b) weekly

2. Circle the fixed expenses. Draw a box around the non-essential expenses.

*Groceries*

*Car payments*

*Electricity*

*Gym membership*

*Bus pass*

*Pet food*

*Lottery tickets*

*Rent*

*Car insurance*

*Digital cable TV*

*Golf clubs*

*Clothing*

3. Trevor holds 2 jobs. He works part-time after school and on weekends. His monthly budget for October is shown.

Income (\$)		Expenses (\$)			
Oct 4–18	272.59	Car insurance	110	Clothes	70
Oct 19–Nov 2	287.09	Money to Mom	100	Cell phone	70
		Gas	80	Saving	50
		Spending money	80		
<b>Total Income =</b>		<b>Total Expenses =</b>			
<b>Balance (Income – Expenses)</b>					

- a) What is Trevor's total income for October? \$ \_\_\_\_\_
- b) What are his total expenses? \$ \_\_\_\_\_
- c) Calculate his monthly balance. \$ \_\_\_\_\_
- d) Explain the meaning of a balanced budget.

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- e) Trevor's hours at work have been cut. He expects to lose about \$75 per pay. Estimate his income for next month. \$\_\_\_\_\_
- f) Change the amount spent on each item in Trevor's budget as necessary to create a balanced budget for November.

Item	Cost	Remaining Income

4. a) A couple is saving \$200 per month in an account so they can replace the roof of their house as soon as possible. The account pays 2% interest per year, compounded monthly. In approximately how many months will they have \$6000 saved?

**N:** \_\_\_\_\_, **I%:** \_\_\_\_\_, **PV:** \_\_\_\_\_, **PMT:** \_\_\_\_\_,  
**FV:** \_\_\_\_\_, **P/Y:** \_\_\_\_\_, **C/Y:** \_\_\_\_\_, **PMT: END BEGIN**

- b) If the couple wants to have the \$6000 saved in 2 years, how much would they need to save each month?

**N:** \_\_\_\_\_, **I%:** \_\_\_\_\_, **PV:** \_\_\_\_\_, **PMT:** \_\_\_\_\_,  
**FV:** \_\_\_\_\_, **P/Y:** \_\_\_\_\_, **C/Y:** \_\_\_\_\_, **PMT: END BEGIN**

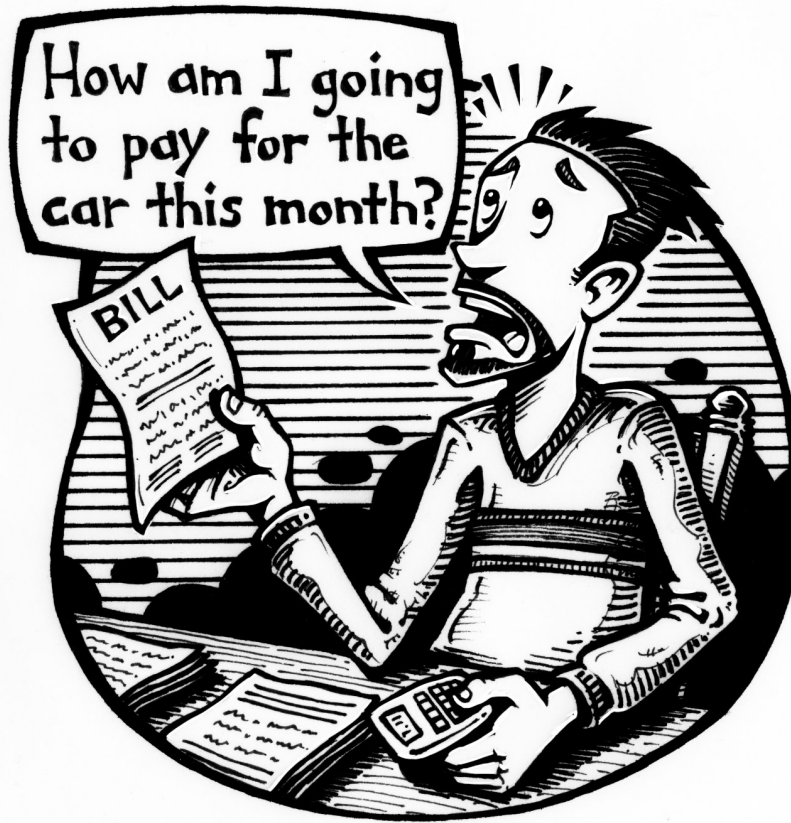
- c) Is fixing the house roof an essential or a non-essential expense? Why do you think so?

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## Task: Out of Control



- Terry is a 43-year-old divorced man with 2 children.
- His take-home pay is \$4123 per month.
- He pays \$1250 per month in child support.
- He pays \$1600 per month for his mortgage.
- His house insurance is about \$85 monthly.
- His car insurance costs \$113 every month.
- His car lease payment is \$245 monthly.
- Terry has an \$8500 loan. He pays \$95 per month to cover the interest.
- Terry has a golf membership which costs approximately \$6000 per year. He makes monthly payments.

1. Create a monthly budget for Terry. Estimate his other expenses, such as food, gas, utilities, and household items.
2. Make 2 suggestions that might help Terry improve his financial position.

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