5 Owning a Home

1. Did her parents really buy their house for $47?

_____

2. What does two-eighty mean?

_____

3. a) By how much did her parents' house increase in value?

_____

   b) By what percent did her parents' house increase in value?

_____

4. Imagine that the young couple's house goes up in the same way as the parents' did. What can they expect it to be worth in 20 years?

_____

_____

5.1   Home Search
Focus: research housing prices

Warm Up	
1. What is $189K?	**2.** **a)** Round $179 900 to the nearest thousand dollars. _____ **b)** Express the answer using the notation in #1. _____
3. How many weeks are in **a)** 1 year? _____ **b)** 2 years? _____ **c)** 5 years? _____	**4.** How many months are in **a)** 5 years? _____ **b)** 10 years? _____ **c)** 20 years? _____
5. Someone with a net income of $720 per week earns either $_____ or $_____ per month.	**6.** What is 5% of $100 000?

Comparing Homes for Sale

1. Brainstorm the types of housing that people can buy in your community.

Chapter 5

2. a) On what streets or in what neighbourhoods in your community would you most like to live? Explain why.

_____

_____

  b) On what streets or in what neighbourhoods in your community would you not like to live? Explain why.

_____

_____

3. Real estate refers to land and all buildings on the land. Houses are real estate. Real estate websites, magazines, and other publications often use abbreviations.

> Go to pages 45–50 to write a definition for **real estate** in your own words.

  a) Write the meaning of each abbreviation below.

  b) Research other abbreviations used in real estate. You can use the Internet or local real estate publications. Write three more abbreviations along with their meanings.

> For information about real estate abbreviations, go to **www.mcgrawhill. ca/books/ workplace12** and follow the links.

Abbreviation	Meaning
C/A	
Cvac	
Sqft	
4BR	
3+1BR	

Chapter

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4. Write an advertisement that would attract buyers to a house with the following features. Use abbreviations.

• *north end neighbourhood* • *storey and a half*
• *4 bedrooms: 2 upstairs, 1 on* • *main floor bath with toilet,*
  main floor, 1 in basement   *sink, tub, and shower*
• *downstairs bath with toilet* • *lot size 57 feet by 180*
  and sink   *feet, fenced backyard*
• *central air conditioning* • *paved driveway*
• *new roof installed this year* • *$229 900*

_____

_____

_____

_____

_____

5. a) Use real estate publications or the Internet to research the cost of housing in your community plus two others.

b) Complete the table by choosing a listing for each category. Record the main features of each listing. Be sure to specify the type of home.

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Price	_____	_____	_____
Less than $100K			
$100K to $200K			

Price	_____	_____	_____
$200K to $300K			
$300K to $500K			
Over $500K			

☑ Check Your Understanding

1. Select a home that you would like to purchase.
You will use this home later in the chapter.
Use the space below to attach a copy of the
listing for the home.

Chapter 5

Tech Tip: Using the TVM Solver to Calculate Mortgage Payments

Example

a) Kara is buying her first home for $255 000. Kara plans to make a 5% down payment and mortgage the rest. Her bank offers a 4.69% interest rate for a 5-year fixed rate mortgage based on an amortization period of 25 years. How much of a mortgage does Kara need?

Calculate the down payment.

$255 000 × 5% = $_____

```
255000*.05
        12750.00
255000-12750
       242250.00
```

Subtract the down payment. $255 000 − $_____ = $_____

Kara needs a mortgage for $_____.

b) Use a graphing calculator to determine Kara's monthly mortgage payment.
Since these calculations involve money, press **MODE**, ↓→→→, **ENTER** to set all calculations to 2 decimal places.
Press **APPS**, **ENTER**, **ENTER** to access the TVM solver.

- N is the number of payments, so N = _____.

- I% is the interest rate, so I% = _____.

- PV stands for _____. This is the amount borrowed, so PV = _____.

- PMT stands for Payment. This is the value we wish to calculate, so let PMT = 0 for now.

- FV is the _____ of the mortgage after all of the payments are made, so FV = 0.

- P/Y is for _____. Since Kara is making monthly payments, set P/Y = 12.

- C/Y is the number of times the interest is compounded in one year. All fixed rate mortgages in Canada have interest compounded twice per year, so C/Y = 2.

- The last line deals with when payments are due. The first payment is due at the END of the first month, so **END** needs to be highlighted.

  After you set all of the variables, the program on the calculator does the work. Scroll up to PMT and press **ALPHA**, **ENTER**, which directs the calculator to SOLVE for the Payment.

- PMT = $ _____ .

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 Kara gives up.

1. Use the TVM solver to determine each monthly mortgage payment.

  a) $140 000 amortized over 20 years at 4.89%

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

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

---

  b) $368 000 amortized over 25 years at 4.25%

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

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

---

  c) $195 500 amortized over 25 years at 5.49%

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

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

Chapter

5

5.2 Buying a Home
Focus: technology, number sense

Warm Up	
1. What is 10% of $200 000? _____	**2.** What is 5% of $200 000? _____
3. What is the difference between a bungalow and a two-storey house? _____ _____	**4.** Approximately what is 5% of $199 000?
5. How many monthly payments are made in **a)** 2 years? _____ **b)** 3 years? _____ **c)** 5 years? _____	**6.** How many pays do you usually receive in one year if you are paid **a)** weekly? _____ **b)** monthly? _____ **c)** bi-weekly? _____
7. If you deposit $100 per month, how much will you deposit in **a)** 1 year? _____ **b)** 2 years? _____	**8.** How old will you be in 25 years?

Chapter 5

Paying for a Home

For most people, buying a home is the single biggest financial decision that they will ever make.

- Buying a home usually involves getting a **mortgage**, which is a loan used to buy property. It is repaid in regular payments over a set period of time.

- It can take as long as 25 to 30 years to pay off a mortgage. This is called the **amortization period**.

- Since interest rates are unlikely to remain the same for 25 years, most mortgages are broken down into 5-year **terms**. Term refers to the length of the current mortgage agreement. When the term expires, you can either pay the balance of the mortgage or sign a new mortgage agreement.

Go to pages 45–50 to write definitions for **mortgage**, **amortization period**, and **term** in your own words.

Types of Mortgages

- In a **fixed rate mortgage**, the interest rate is set for the term of the mortgage. That means the payments stay the same for the length of the term.
- In a **variable rate mortgage**, the interest can change every month. Interest rates can go up or down. This means the payments can change.

> Go to pages 45–50 to write a definition for **fixed rate mortgage** and **variable rate mortgage** in your own words.

1. Give one advantage of each type of mortgage.

fixed rate _____

variable rate _____

2. a) What risk do you take with a variable rate mortgage?

_____

b) What advice would you give someone who is considering a variable rate mortgage?

_____

_____

First Time Home Buyer

Before you can buy a home, you need to save for a **down payment**. This is the part of the home price that is not financed by a mortgage. First-time buyers need a down payment of 5%.

> Go to pages 45–50 to write a definition for **down payment** in your own words.

3. List 2 advantages and 2 disadvantages of owning a home. Consider financial and non-financial factors.

Chapter 5

Advantages of Buying	Disadvantages of Buying
a) _____	a) _____
_____	_____
b) _____	b) _____
_____	_____

4. Sun and Rick want to buy a townhouse priced at $195 000. They need to make a 5% down payment in order to obtain their mortgage.

a) Calculate the down payment.
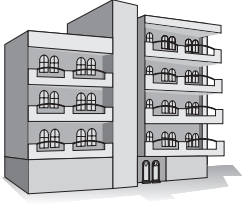
b) How much is the mortgage?

5. a) Maria and Glen plan to buy a house in 2 to 5 years. A 10-year-old bungalow in their community sells for about $210 000. How much do they need to save to make a 5% down payment?

b) Maria and Glen have a combined net income of $54 000 per year. How much do they earn per month?

c) They decide to save 10% of their monthly income. How long will it take them to save their down payment?

6. Peter sees a listing for a 3-bedroom bungalow on a small lot for $121 500.

a) How much is a 5% down payment?

b) Peter works as a line cook for $10.15/h and usually works 40 h/wk. What is his gross salary in a 4-pay month?

c) Because he still lives with his parents, Peter can save 15% of his gross pay. How long will it take him to save the down payment for this house?

d) His favourite aunt hears about his plans and gives him $2000 toward the down payment. How long will it take him to save the balance?

Chapter 5

How Much Can You Afford?

- According to some financial experts, you should not spend more than 32% of your gross monthly income on housing.
- Housing expenses include mortgage payments, property taxes, and heating expenses.
- For condo owners, the monthly condo fee is also included. This money covers shared expenses like snow removal, grass cutting, and building maintenance.

7. Nayara and Tom want to buy a condominium. Each month, they receive a combined gross income of $3175. The proposed monthly housing costs for the condo are $550 for the mortgage, $175 for property taxes, $125 for heating, and $125 for condo fees.

   a) What is 32% of Nayara and Tom's gross monthly income?

   b) Can they afford the condominium? Explain.

- According to the Canada Mortgage and Housing Corporation (CMHC), you should not spend more than 40% of your gross monthly income to repay debts.
- Debts include housing costs, and other things such as car loans and credit card payments.

8. Nayara and Tom make monthly car payments of $225. They also pay $150 on their credit card.

   a) What is 40% of Nayara and Tom's gross monthly income?

   b) Can they afford to pay the housing costs after paying for their other debts? Explain.

   c) What advice would you give the couple if they want to buy the condominium?

Chapter 5

9. a) In the Tech Tip on page 171, Kara ended up with

a monthly payment of $_____.

b) Since her amortization period is 25 years, she has agreed to make monthly payments for 25 years! That means she will make _____ monthly payments before she actually owns the house!

c) The total that Kara will repay the bank is

_____ × _____ = $ _____.
     monthly   number of   total paid
     payment   payments

d) Add in Kara's down payment. She will end up

paying $_____ for this home.

e) Suggest two options Kara might use to help her pay back the mortgage more quickly.

_____

_____

_____

f) How would your ideas in part e) save Kara money?

_____

_____

10. For each mortgage in #1 of the Tech Tip on page 171, calculate:
- the total amount repaid to the bank
- the total interest paid over the life of the mortgage

Fixed Rate Mortgage Amount	Monthly Payment	Number of Payments	Total Amount Repaid	Total Interest Paid
a) $140 000				
b) $368 000				
c) $195 000				

Chapter 5

11. Look at your answers for #10. Compare the total interest paid and the original mortgage amount.

_____

_____

_____

☑ Check Your Understanding

1. In the previous section, you selected a home to purchase.

The purchase price of the home is $_____.

a) Calculate 5% of the purchase price as a down payment.

_____

b) Calculate the amount of the mortgage.

_____

c) Research mortgage interest rates. Today's best interest rate for a 5-year fixed rate mortgage is _____.

d) Use a TVM solver or an online calculator to determine your monthly mortgage payment. Assume a 25-year amortization period.

For information about mortgage interest rates, go to **www.mcgrawhill. ca/books/ workplace12** and follow the links.

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

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e) If you pay this amount every month for 25 years, how much will you pay before you own the home?

_____

5.3 The Cost of Owning a Home

Focus: budgeting, number sense

Warm Up	
1. If Cal makes a monthly mortgage payment of about $1000, he pays about $ _____ in 1 year.	**2.** Explain the difference between bi-monthly and semi-monthly. _____ _____ _____
3. An employee paid bi-weekly is usually paid _____ times per year.	**4.** An investment with quarterly compounding earns interest _____ times per year.
5. All fixed rate mortgages in Canada have interest compounded _____ times per year.	**6.** What is the average of 100, 120, and 170?

What Does It Cost to Own a Home?

Mortgage payments are not the only expense when you own a home. There are other expenses to consider.

- Some expenses are regular. Some occur only once in a while.
- Some expenses are predictable and some can catch you by surprise.

1. In a small group, brainstorm expenses that you would expect from owning a home. Do not include everyday living expenses like food or clothing.

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5
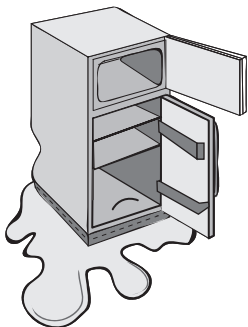
2. Talk to a homeowner. Develop a list of 10 home expenses. Find out the approximate cost of each in a typical year.

Home Expenses	Annual Cost

3. Gail is retired with a fixed income of $1900 per month. She lives in a 1-bedroom condominium.
- Her mortgage payment is $618 per month.
- The condo fees are $325 per month.
- The hydro bill averages $150 every 2 months.
- The quarterly water bill averages $180.

a) Calculate Gail's fixed monthly housing expenses.

_____

b) Calculate Gail's average monthly expenses for **utilities.** Utilities refer to basic services such as electricity, gas, and water.

_____

_____

c) On average, how much of her income is left each month?

_____

Go to pages 45–50 to write a definition for **utilities** in your own words.

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4. Franca and Derek have owned their home for a year. They recorded their expenses on the spreadsheet below.

	A	B	C	D	E	F	G	H	I
1		**Mortgage**	**Property Tax**	**Security**	**Natural Gas**	**Electricity**	**Water**	**Cable/ Internet/ Phone**	**Total Monthly Expense**
2	**January**	1163.57		41.50	234.69			104.99	
3	**February**	1163.57	912.32	41.50	264.09	240.00		104.99	
4	**March**	1163.57		41.50	222.83		301.46	104.99	
5	**April**	1163.57		41.50	217.06	278.89		104.99	
6	**May**	1163.57	912.32	41.50	187.37			104.99	
7	**June**	1163.57		41.50	187.37	168.09	316.08	104.99	
8	**July**	1163.57		41.50	187.37			146.99	
9	**August**	1163.57	912.32	41.50		238.36		146.99	
10	**September**	1163.57		41.50	390.20		312.42	146.99	
11	**October**	1163.57		41.50	164.21	189.12		146.99	
12	**November**	1163.57	912.32	41.50	164.21			146.99	
13	**December**	1163.57		41.50	164.21	202.39	277.09	146.99	
14	**Total Annual Cost Per Expense**								

a) Complete column I by adding all the values in each row.

b) Complete row 14 by adding all the values in each column.

c) In which month did Franca and Derek have the greatest home expenses? _____

d) What is their average monthly cost for electricity?

_____

e) On average, how much do Derek and Franca spend on household expenses each month?

_____

Check that the total of column 1 is the same as the total of row 14.

Expect the Unexpected

Sometimes, expenses are unexpected. For example:
• A city sewer can back up, flooding your basement.
• An appliance can stop working.

5. Research the cost of replacing the following items, including taxes. Then, record information for 2 additional items of your choice.

a) microwave oven	**b)** fridge
c) garage door	**d)** dishwasher
e) 15 m² of carpet	**f)** furnace
g)	**h)**

☑ Check Your Understanding

1. a) List expenses that a homeowner has that a renter may not have. _____

_____

b) List responsibilities that a homeowner has that a renter may not have. _____

_____

c) List freedoms that a homeowner has that a renter may not have. _____

_____

Chapter 5

Chapter 5 Review

The following advertisement appeared in a newspaper.

Country in the City
• 4+1 bedrooms on half-acre ravine lot
• 3 bathrooms
• solar-heated indoor pool
• many recent upgrades
• $599 900
• Must be seen to be believed!

1. Round the price to the nearest thousand dollars. $_____

2. Explain 4+1 bedrooms.

_____

_____

3. a) After selling your current home for $293 500 and paying some bills, you make a down payment of $250 000. The mortgage on your new home is $349 900. The mortgage will be amortized over 25 years at a rate of 5.32%. Use a TVM solver or an online calculator to determine the monthly mortgage payment.

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

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

b) If you made monthly payments for 25 years, what is the total amount that you would repay the bank?

_____

c) What is the total amount of interest that you would pay?

_____

d) What is the total amount that you would pay for your home, including the down payment?

_____

4. The spreadsheet shows last year's expenses for the home in #1.

    a) Complete column G and row 14.

    b) Which month had the greatest home expenses? _____

    c) What was the average monthly cost for natural gas?

    _____

    d) On average, how much was spent on household expenses each month?

    _____

	A	B	C	D	E	F	G
1		Property Tax	Natural Gas	Electricity	Water	Cable/ Internet/ Phone	Total Monthly Expense
2	January		272.89	340.22		146.99	
3	February	1050.00	303.28			146.99	
4	March		274.09	301.46	189.12	146.99	
5	April		232.13			146.99	
6	May	1050.00	197.30	338.36		146.99	
7	June		187.37			146.99	
8	July		177.37	368.79	264.21	146.99	
9	August	1050.00	164.21			146.99	
10	September		217.06	312.42		146.99	
11	October		244.49			132.47	
12	November	1050.00	290.25	416.68	277.09	132.47	
13	December		278.89	340.22		132.47	
14	Total Annual Cost						

Chapter 5

5. List 3 other expenses that you would expect to pay if you owned this home.

    a) _____

    b) _____

    c) _____

Chapter 5 Practice Test

1. a) The following abbreviations are found in real estate advertisements. Give the meaning of each.

Sqft _____

C/A _____

Condo _____

Kit _____

b) What is the difference between a 4BR house and a 3+1BR house?

_____

_____

2. For each price range, describe the type of accommodations, if any, that can be purchased in your community.

a) Under $100 000 _____

b) $200 000 to $300 000 _____

_____

c) Over $400 000 _____

3. a) All fixed rate mortgages in Canada have interest compounded

_____ , that is, _____ times per year.

b) The Azirs have a $266 000 mortgage amortized over 25 years at 4.55% interest. Use a TVM solver or an online calculator

to determine their monthly payment. _____

c) The Azirs will make _____ monthly payments before they finish paying for their home.

d) What total amount will the Azirs repay the bank? Assume that the interest rate stays the same.

_____ × _____ = _____

monthly payment   number of payments   total paid

e) How much interest will they pay over the life of the mortgage?

_____

Chapter 5

4. a) David has a 5% down payment on a semi-detached home for sale at $314 000. What is the amount of his down payment?

_____

b) What is the amount of the mortgage after making the down payment in part a)?

_____

5. What are 5 expenses that you would expect to pay if you owned a condo? Identify each as a fixed expense or a variable expense.

a) _____

b) _____

c) _____

d) _____

e) _____

6. Marina lives in a 2-bedroom condominium overlooking a lake. Her expenses are as follows.
- The bi-weekly mortgage and property taxes are $718.
- The condo fees are $525 per month.
- The electricity bill averages $320 bi-monthly.
- The quarterly water bill averages $210.

a) Calculate Marina's fixed monthly expenses for housing.

_____

b) Calculate Marina's average monthly expenses for utilities.

_____

c) What is her average total monthly cost for housing?

_____

Chapter 5

7. What is 1 advantage and 1 disadvantage of owning a home? Consider financial or non-financial factors.
Advantage of buying:

_____

Disadvantage of buying:

_____

Task: Buying Your Dream Home

Now, this is what I call living the dream!

To conduct a real estate search, go to **www.mcgrawhill.ca/books/workplace12** and follow the links.

Most people do not live their whole life in the place where they were born. Perhaps you have already moved once or more than once. Dream a little and select a Canadian community in which you would like to live.

1. a) Conduct a real estate search. Select a dream home, such as, a condominium, a duplex, or a detached house. Save the ad that describes your dream home.

   b) Round the purchase price to the nearest thousand

      dollars. $_____

   c) State the annual property taxes, if given. If not given, use 1% of the value of the house and calculate the

      property taxes. $_____

Your submission for this task will include
- an electronic folder of web pages or a collection of real estate ads
- a spreadsheet showing the full costs of the house