

## AWM 11 – UNIT 2 – MANAGING YOUR MONEY

<b>Assignment</b>	<b>Title</b>	<b>Work to complete</b>	<b>Complete</b>
<b>1</b>	<b><i>Financial Institutions</i></b>	Financial Institutions	
<b>2</b>	<b><i>Types of Bank Accounts</i></b>	Bank Accounts	
<b>3</b>	<b><i>ATMs and Debit Cards</i></b>	ATMs and Debit Cards	
<b>4</b>	<b><i>Online Banking</i></b>	Online Banking	
	<b><i>Quiz</i></b>		
<b>5</b>	<b><i>Income and Expenses</i></b>	Income and Expenses	
<b>6</b>	<b><i>Savings</i></b>	Savings	
<b>7</b>	<b><i>Creating a Budget</i></b>	Creating a Budget	
<b>8</b>	<b><i>Analyzing Budgets</i></b>	Adjusting Expenses	
<b>9</b>	<b><i>More Analyzing Budgets</i></b>	Adapting Budgets	
<b>Practice Test</b>	<b>Practice Test</b> How are you doing?	Get this page from your teacher	
<b>Self-Assessment</b>	<b>Self-Assessment</b> <b><i>“Traffic Lights”</i></b>	On the next page, complete the self-assessment assignment.	
<b>Chapter Test</b>	<b>Chapter Test</b> Show me your stuff!		

## Self Assessment

In the following chart, show how confident you feel about each statement by drawing one of the following: 😊, 😐, or ☹️. Then discuss this with your teacher **BEFORE** you write the test!

Statement	😊 😐 ☹️
After completing this chapter;	
<ul style="list-style-type: none"> <li>I can describe different types of financial institutions and the different banking services offered</li> </ul>	
<ul style="list-style-type: none"> <li>I can describe different types of accounts available</li> </ul>	
<ul style="list-style-type: none"> <li>I can identify the type of account that best meets the needs for a given situation</li> </ul>	
<ul style="list-style-type: none"> <li>I can explain various ATM charges</li> </ul>	
<ul style="list-style-type: none"> <li>I understand and can describe the advantages and disadvantages of online banking and debit card purchases</li> </ul>	
<ul style="list-style-type: none"> <li>I can describe ways to make sure of the security of personal and financial information like a PIN</li> </ul>	
<ul style="list-style-type: none"> <li>I understand the concept of a balanced budget</li> </ul>	
<ul style="list-style-type: none"> <li>I can organize spending and income data and create a personal budget</li> </ul>	
<ul style="list-style-type: none"> <li>I can and make changes to an existing budget to balance it</li> </ul>	
<ul style="list-style-type: none"> <li>I can analyze a budget using a circle graph, and adjust it in order to afford future expenses</li> </ul>	

## Vocabulary: Unit 2

ATM

bank

budget

credit union

debit card

deficit

expenses

fixed expenses

full-service banking

income

investment company

loan company

PIN

recurring expenses

regular income

self-serve banking

surplus

transactions

trust company

unexpected expenses

variable expenses

variable income

## **FINANCIAL INSTITUTIONS**

You have probably heard of many different types of financial institutions already, but may not know that there are some differences between them. While some of the differences are small, there are some that are worth understanding.

Financial Institution	Features and Services
<b>banks</b>  e.g. Bank of Montreal, Royal Bank	<ul style="list-style-type: none"> <li>• government licensed</li> <li>• publically traded stock on the stock market</li> <li>• services include               <ul style="list-style-type: none"> <li>- chequing and savings accounts</li> <li>- ATM services and online banking</li> <li>- currency exchange</li> <li>- bill payments</li> <li>- safety deposit boxes</li> <li>- investments like RRSPs, GICs, term deposits</li> <li>- loans, mortgages, lines of credit, overdraft protection</li> </ul> </li> </ul>
<b>credit unions</b>  e.g. Vancity, North Shore Credit Union	<ul style="list-style-type: none"> <li>• account holders are members who have a say in the institution's financial policies; a cooperative</li> <li>• similar to banks in how they function and the services offered</li> <li>• many offer a combined savings/chequing account</li> </ul>
<b>loan companies</b>  e.g. Alpine Credits, Capital Direct Lending Corp.	<ul style="list-style-type: none"> <li>• provide loans and mortgages</li> <li>• may offer better interest rates than banks or credit unions</li> </ul>
<b>investment companies</b>  e.g. Manulife Financial, Phillips, Hager and North	<ul style="list-style-type: none"> <li>• financial planning services</li> <li>• wealth management: services like choosing an investment, planning for taxes, estate planning</li> <li>• other investments like RRSPs, GICs, savings accounts</li> </ul>
<b>trust companies</b>  e.g. HSBC Trust, Royal Trust Corporation of Canada (not Royal Bank!)	<ul style="list-style-type: none"> <li>• manage and invest assets for an individual, company, estate or trust</li> <li>• keep records, pay bills, pay out inheritances, distribute assets</li> </ul>

## **ASSIGNMENT 1 – FINANCIAL INSTITUTIONS**

1) Which of the following services are provided by a bank? Circle your choices.

loans

GICs

estate management

online banking

health insurance

overdraft protection

2) Simon wants to start an RRSP but does not know much about them. Name all of the financial institutions Simon could ask for information.

3) Which of the financial institutions would you consider for each of the following services? Often more than one answer is needed.

a) take a mortgage

b) investments

c) day-to-day money transactions

d) managing assets

e) borrowing money

4) Anna needs a small loan to help with the costs of her new café. Where might she borrow the money, and what advice would you give her? Give at least two options.

5) What are the names of two financial institutions in the area that you live in? Use the internet to help you if necessary.

## TYPES OF BANK ACCOUNTS

Banks and credit unions offer different types of accounts so individuals can choose the one that best suits them. If you write a lot of cheques, for example, you may need a different type of account than a person who writes very few cheques.

Banks also charge monthly service fees for their accounts. But when you deposit money at a financial institution, it may pay you interest. The amount of interest depends on the type of account and the amount of money in it. In order to earn interest, some accounts also require a minimum balance is maintained each month.

Banks offer different ways to access and manage your account. You are probably familiar with them, if not their names.

- **Self-service banking** is banking done over the phone, over the internet (online banking), or through a banking machine called an **ATM** (automated teller machine). Whichever is used, or combination of these, a bank teller is not required.
- **Full-service banking** is banking you do in person at the bank with the help of a teller. Tellers will conduct the same self-service options mentioned above. There are some services that can only be done through full-service banking. These include opening or closing an account, exchanging Canadian money for a foreign currency, or purchasing traveller's cheques.



Not only do banks charge service fees for having an account, they also may charge every time you use your account. These are called transactions, and they could include deposits, cash withdrawals, bill payments, cheques, money transfers, and using your debit card. Most accounts include a certain number of free transactions with your monthly service fee. There can be an additional cost for each transaction over that number.



There are many different types of accounts offered by financial institutions. Each one has its own name for the different accounts, but they will all have some form of a chequing account and a savings account.

For this course, the accounts used are described on the next page.

## NORTHWEST BANK OF CANADA ACCOUNTS

	Value Account	Self-service Account	Full-service Account	Savings Account
Monthly Fee	\$3.90	\$10.90 Students and Youth (under 18) save 50% on the monthly fee	\$24.50	No fee
Fee waived on minimum monthly balance amount	\$1000.00	\$1500.00	\$2000.00	
Transactions covered by monthly fee: <ul style="list-style-type: none"> <li>• cheques</li> <li>• withdrawals</li> <li>• bill payments</li> <li>• debit purchases</li> <li>• transfers to another account with Northwest Bank of Canada</li> </ul>	10 self-service	25 self-service	40 self-service or teller-assisted No annual fee for credit card	2 debit transactions
Charge for additional transactions not covered by monthly fee	Self-service - \$0.50 each Teller-assisted \$1.00 each	Self-service - \$0.50 each Teller-assisted \$1.00 each	Self-service - \$0.25 each	Self-service or teller-assisted \$1.25 each
Non-Northwest Bank of Canada ATM withdrawals	\$1.50 each	\$1.50 each		
Interest paid	None	None	None	Daily interest that grows your balance

### **Transaction Types**

*Self-service: Any transaction that does not require a bank teller. This includes withdrawals, deposits, cheques, money transfers, direct payment purchases, and transactions made at an ATM, by telephone, or online.*

*Teller-assisted: Includes all transactions that require or use a teller, such as in-branch withdrawals, in-branch bill payments, and traveller's cheque and foreign currency purchases.*

Deciding on which bank account to choose really depends on your specific needs. It is important to look at this carefully so you do not spend money unnecessarily.

**Example 1:** Elsie wants to open a new bank account. She makes 2 deposits and 5 cash withdrawals at her ATM each month. She pays 4 bills online and keeps a balance over \$1000 each month. Which account would you advise her to use, and what are her fees for each of the different accounts that Northwest Banks of Canada offers?

**Solution:** Complete the chart below to choose the best account for Elsie.

NOTE: Because Elsie is not using her new account for saving money, the *Bonus Savings Account* is not included in this chart.

*Monthly Fees:* Elsie maintains a monthly balance of \$1000.00 so her monthly fees will be waived (not charged) for the Value Account, but will be charged for the Self-Service and Full-Service Accounts.

*Transaction Charges:* Elsie makes a total of 11 self-service transactions each month. For the Value Account, 10 of these transactions are free and she will have to pay \$0.50 for the 11<sup>th</sup> transaction. All the transactions are free with the Self-Service and Full-Service Accounts.

<b>ACCOUNT OPTIONS</b>			
	Monthly fee	Transaction Charges	TOTAL
Value Account	\$0	11 – 10 free = 1 paid 1 × \$0.50 = \$0.50	\$0 + \$0.50 = \$0.50
Self-service Account	\$10.90	25 free – 11 = 14 unused no charges	\$10.90 + \$0 = \$10.90
Full-service Account	\$24.50	40 free – 11 = 29 unused no charges	\$24.50 + \$0 = \$24.50

I would advise Elsie to choose the Value Account as it has the lowest fees for her needs.

It is important to keep track of the money in your account whether you use ATMs, online banking, or full-service transactions. To do this, you need to maintain a transaction record. This can be done manually or with a computer software package like Quicken©. We will use the manual record keeping option here.

Example 2: Ajay kept a manual transaction record for the last month for his Value Account.

- a) How much will Ajay pay in service charges for this month?
- b) What is his final balance at the end of the month?

<i>Transaction</i>	<i>Description</i>	<i>Withdrawal</i>	<i>Deposit</i>	<i>Balance</i>
				\$4398.40
ATM	Cash	\$100.00		
ATM*	Cash (other ATM)	\$40.00		
Bank card	Lunch	\$12.95		
Bank card	Groceries	\$174.32		
ATM	Birthday gift		\$50.00	
TELLER	Phone bill	\$62.31		
Auto- withdrawal	Car payment	\$275.48		
ATM	Cash	\$100.00		
Direct deposit	Paycheque		\$586.21	
Auto-withdrawal	Rent	\$790.00		
Bank card	Groceries	\$58.21		
Bank card	Lunch	\$8.59		
Direct deposit	Paycheque		\$586.21	
Teller	Gas bill	\$107.45		

Solution:

- a) There are 3 transactions that will cost Ajay money this month.
  - 1) Ajay made 12 transaction and his Value Account only gives him 10 free. One of these transactions is an ATM not with his bank. So he will have to pay for 1 extra transaction and the extra ATM charge.  
 $1 \times \$0.50 = \$0.50$
  - 2) Ajay used an ATM that was not part of his bank. This causes another charge of \$1.50
  - 3) Ajay paid 2 bills at a teller. Each of these “teller-assisted” transactions costs Ajay \$1.00  
 $2 \times \$1.00 = \$2.00$

Ajay’s total service charges are:  $\$0.50 + \$1.50 + \$2.00 = \mathbf{\$4.00}$



b) To calculate Ajay's final balance, it is necessary to subtract each withdrawal and add each deposit to get the balance for each transaction. Make sure to include the previous service charges for the transactions mentioned in part a) above.

For this example, the calculations are written in the balance column. You are not required to do this when completing this type of question. Do the calculations on your calculator and just fill in the answer.

<i>Transaction</i>	<i>Description</i>	<i>Withdrawal</i>	<i>Deposit</i>	<i>Balance</i>
				\$4398.40
ATM	Cash	\$100.00		$\$4398.40 - \$100.00 = \$4298.40$
ATM*	Cash (other ATM)	\$40.00 + 1.50 service charge		$\$4298.40 - \$40.00 - \$1.50 = \$4256.90$
Bank card	Lunch	\$12.95		$\$4256.90 - \$12.95 = \$4243.95$
Bank card	Groceries	\$174.32		$\$4243.95 - \$174.32 = \$4069.63$
ATM	Birthday gift		\$50.00	$\$4069.63 + \$50.00 = \$4119.63$
Teller	Phone bill	\$62.31 + \$1.00 service charge		$\$4119.63 - \$62.31 - \$1.00 = \$4056.32$
Auto- withdrawal	Car payment	\$275.48		$\$4056.32 - \$275.48 = \$3780.84$
ATM	Cash	\$100.00		$\$3780.84 - \$100.00 = \$3680.84$
Direct deposit	Paycheque		\$586.21	$\$3680.84 + \$586.21 = \$4267.05$
Auto-withdrawal	Rent	\$790.00		$\$4267.05 - \$790.00 = \$3477.05$
Bank card	Groceries	\$58.21		$\$3477.05 - \$58.21 = \$3418.84$
Bank card	Lunch	\$8.59		$\$3418.84 - \$8.59 = \$3410.25$
Direct deposit	Paycheque	+ \$0.50 service charge	\$586.21	$\$3410.25 + \$586.21 - \$0.50 = \$3995.96$
Teller	Gas bill	\$107.45 + \$1.00 service charge		$\$3995.96 - \$107.45 - \$1.00 = \$3887.51$

Ajay's balance this month did not drop below \$1000 so he will not be charged the monthly fee of \$3.90 for his Value Account.

Ajay's final balance is \$3887.51.

## **ASSIGNMENT 2 – BANK ACCOUNTS**

- 1) Dana does most of her banking online or at an ATM. She keeps a minimum of \$1400 every month in her account and does about 15 transactions. Which is the most suitable account for her needs? Complete the chart below to justify your choice.

<b>ACCOUNT OPTIONS</b>			
	Monthly fee	Transaction Charges	TOTAL
Value Account			
Self-service Account			
Full-service Account			

- 2) Dennis currently has a Value Account at the Northwest Bank of Canada. He makes 4 direct deposits per month and pays 7 bills online. Last month, he made 11 cash withdrawals from his bank's ATM and also made 4 debit purchases with his bank card. He keeps at least \$1500 a month in his account. Calculate his service charges for each of the accounts, and suggest whether Dennis has chosen the best account for his needs.

<b>ACCOUNT OPTIONS</b>			
	Monthly fee	Transaction Charges	TOTAL
Value Account			
Self-service Account			
Full-service Account			

3) Moira has a *Full-service Account* at the Northwest Bank of Canada. Complete the transaction record below for her by filling in the Balance column, and calculate Moira's month-end balance.

<b>Transaction</b>	<b>Description</b>	<b>Withdrawal</b>	<b>Deposit</b>	<b>Balance</b>
				\$1798.53
Direct deposit	Paycheque		\$1432.51	
ATM	Cash	\$200.00		
Bank card	Groceries	\$63.95		
Bank card	Clothes	\$75.32		
Bank card	Movie	\$24.50		
Teller	Hydro bill	\$89.56		
Direct deposit	Paycheque		\$1432.51	
ATM	Cash	\$100.00		
Auto-withdrawal	Loan Payment	\$375.86		
Bank card	Groceries	\$154.32		
Bank card	Gas	\$58.23		
Bank card	Dinner	\$25.38		
Auto-withdrawal	Rent	\$575.00		
Bank card	Books	\$123.45		

4) Lucy has a Value Account. She makes the following transactions during a one month period. Fill in the transaction record and calculate her balance at the end of the month. Watch for service charges on her transactions! There are many.

<b>Transaction</b>	<b>Description</b>	<b>Withdrawal</b>	<b>Deposit</b>	<b>Balance</b>
				\$4986.54
ATM	Cash	\$250.00		
Bank card	Dinner	\$25.32		
Bank card	Groceries	\$145.93		
Direct deposit	Paycheque		\$524.66	
Bank card	Movie	\$12.98		
ATM	Cash	\$100.00		
Bank card	Gas	\$48.96		
Teller	Utilities	\$123.23		
Auto-withdrawal	Rent	\$550.00		
Direct deposit	Paycheque		\$524.65	
Bank card	Groceries	\$185.24		
ATM	Cash	\$100.00		
Teller	Phone	\$47.25		
Bank card	Misc.	\$12.32		
Bank card	Dinner	\$15.88		
ATM	Cash	\$200.00		
Bank card	Prescription	\$32.54		

## ATMS AND DEBIT CARDS

As previously mentioned, many of your banking needs can be done through a banking machine called an **ATM** (automated teller machine). To use an ATM, you will need a bank card – also called a **debit card**.



Debit cards can be used for many different things such as:

- Making withdrawals or deposits or transferring money between your accounts at an ATM at your financial institution
- Paying bills at a branch of your bank or credit union, or through the ATM
- Making purchases at a store, restaurant, or most other places where cash is accepted
- Withdrawing cash at many ATMs worldwide. Remember, there will be extra service charges (fees) if you use an ATM that is not your own bank's, or is in another country
- Accessing your account by phone or online (more on that later)

To use your debit card, you will have to set up a personal identification number or **PIN**. The PIN is a series of numbers that are linked to your debit card. It allows only you to safely have access to your accounts. It is extremely important **NOT** to share your PIN with anyone else. When using a pinpad at a bank or other service, it is also a good practice to cover the pad with your free hand to shield the numbers you are entering in case someone is watching. Financial institutions also recommend that you change your PIN at least once a year, or more often if you think someone saw you enter your code. Most ATMs allow you to change your PIN without having to visit your bank.

There are advantages and disadvantages to using a debit card, like most other choices we make in our lives.

Advantages include

- Debit is more convenient than writing a cheque as all transactions are recorded electronically and it stops forgetful people from writing down a cheque they wrote
- Usually you must also carry ID to write a cheque. This is not the case with a debit card.
- Many places do not take cheques any longer.
- You do not need to carry a lot of cash.
- It is easier to keep track of your spending because once you run out of money in your bank account, you can't pay for anything with debit!



Disadvantages include:

- There may be fees involved if you use your debit card at an ATM that is not your bank's ATM.
- You must be very careful with your debit card and your PIN so that they are not lost or stolen.
- There is a daily limit to how much cash you can withdraw from your account using your debit card at an ATM.

## **ASSIGNMENT 3 – ATMS AND DEBIT CARDS**

1) Circle the services that you can do with a debit card.

pay bills	buy items on credit	borrow money
earn interest	with draw money	buy groceries
deposit money	check balances	invest in TFSAs
transfer money between accounts	withdraw money when travelling	

2) Circle the advantages of using a debit card.

no interest charges	safer than carting cash
may have fees	accepted at most retailers
easy to carry	another number I need to remember
can be used 24/7	can be lost or stolen
easy to get at a bank	cannot spend more than you have
has a daily limit on cash withdrawal	convenient record keeping

3) Circle the disadvantages of using a debit card.

no interest charges	safer than carting cash
may have fees	accepted at most retailers
easy to carry	another number I need to remember
can be used 24/7	can be lost or stolen
easy to get at a bank	cannot spend more than you have
has a daily limit on cash withdrawal	convenient record keeping

## **ONLINE BANKING**

Online banking is exactly what the name states – it's doing your banking through the internet. To access your bank account online, you need to have access to your bank's secure website, you need your debit card number, and you need a secure password. This secure password is always different from the PIN for your debit card. In fact, while your pin can only be numbers, it is recommended that your password is a combination of letters and numbers.



Online banking gives a person 24/7/365 access to an account. The access can be from anywhere in the world where there is a secure Internet connection. To ensure you have a secure connection, check the web address: it should read “https:” rather than just “http:” The “s” shows the site is secure. Both this and your secure password help to reduce the chance of fraud and identity theft online.

Many of the things that can be done with your debit card at an ATM can be done through online banking as well. And with online banking, there are even more things that can be done. Online services include:

- monitoring accounts
- paying bills for companies with online payment access
- paying taxes
- transferring money between accounts
- managing investments
- ordering cheques
- ordering foreign currencies
- applying for loans or credit cards
- reporting a lost or stolen debit card



Despite the many things that can be done with online banking, there are some disadvantages. Some people do not own a computer or do not have internet access. Some people have difficulties using a computer, especially elderly people who never grew up with them. Some people still like to have a face-to-face discussion with a teller so they know that their requests are being carried out properly. And finally, many people are worried about fraud and computer safety and distrust the bank's websites.

## **ASSIGNMENT 4 – ONLINE BANKING**

1) Circle the disadvantages of online banking.

- |                               |                                     |
|-------------------------------|-------------------------------------|
| 24/7/365 access               | unable to deposit or withdraw money |
| no waiting in line            | instant access to accounts          |
| save time                     | no in-person customer service       |
| identity theft                | track account transactions          |
| accessible from anywhere      | insecure sites                      |
| difficulties using a computer | online banking is expensive         |

2) Answer true or false to each of the following.

- a) You need your debit card number and a password to bank online. \_\_\_\_\_
- b) It is not safe to use the age or birthday of a family member or part of your address for your password or PIN. \_\_\_\_\_
- c) You cannot pay bills with online banking. \_\_\_\_\_
- d) Financial institutions use encryption technology to ensure your information when you bank online. \_\_\_\_\_
- e) Online banking is safest when you use your home computer. \_\_\_\_\_
- f) Bills paid online on the weekend are not processed until the next business day. \_\_\_\_\_
- g) It is important to log out each time you have finished your online banking session. \_\_\_\_\_

3) Identity theft is a problem in Canada. List at least 3 things that you personally can do to help protect against identity theft. If needed, do some brief research online to help you.

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**ASK YOUR TEACHER FOR THE UNIT QUIZ.**



## INCOME AND EXPENSES

Whether you currently have a job or are looking for one, at some point you will earn your own money and start to pay for things you want or need. Eventually you be living in your own place and have to support yourself with the money you make. This money you earn will be your source of **income**, and the bills you pay will be your **expenses**. A **budget** is a planning tool to help you work with your income and expenses. It is a balanced statement of expected income and expenses.



There are different types of income you will need to consider. Some income is received at set times. This income, **regular income**, includes things like wages, salary, and interest income from certain investments. Other income is called **variable income**. It is income where the amount changes over time and/or it is not received on a regular basis. This includes income like tips, commissions, contract income, piecework, lottery prizes (!) and even gifts of cash like for your birthday.



There are three different types of expenses: fixed expenses, variable expenses, and unexpected expenses. **Fixed expenses** are exactly what the name implies; they are predictable and do not change from month to month in amount or timing. Things like loan payments, rent or a car payment are examples of fixed expenses. **Variable expenses**, such as groceries, gas, eating out, entertainment, or gifts, are costs that change from one month to the next. **Unexpected expenses** are hard to predict and often are things that you must pay for even if you have not budgeted for them. An emergency car repair or vet bill for your cat could be classed as unexpected expenses. One expense not listed is a utility bill. This could either be a fixed or variable expense depending how the account is set up. Many people have chosen a regular monthly payment so when it is cold in the winter, their gas or hydro bill does not cost any more than in the summer when usage is much lower and costs are less. It makes budgeting mush easier!

Many of these expenses could be classed as **recurring expenses** in that they happen over and over. Sometimes they are fixed expenses but other times they are variable expenses.

## **ASSIGNMENT 5 – INCOME AND EXPENSES**

1) Classify the following types of income as regular or variable, and explain your reason.

<b><i>Item</i></b>	<b><i>Classification</i></b>	<b><i>Reason</i></b>
Monthly paycheque		
Tax refund		
Tips		
Christmas money		
Babysitting earnings		
Investment interest		

2) Classify the following expenses as fixed, variable, or unexpected and explain your reason. For any that are recurring, add that too.

<b><i>Item</i></b>	<b><i>Classification</i></b>	<b><i>Reason</i></b>
Rent		
New coat		
Loan payment		
Groceries		
Car repairs		
Restaurant meals		
Replace iPod		
Vehicle insurance		
Gym membership		

3) Barb has the following income and expenses for the month of July. Identify which are income and which are expenses.

Paycheque	\$375.00
Gas for car	\$67.95
Car loan payment	\$195.00
New jeans	\$85.00
Restaurant meal	\$27.49
Babysitting Money	\$75.00
Paycheque	\$375.00
Cell phone bill	\$52.46
Room and Board	\$200.00
Birthday present for Mom	\$65.00
Charitable donation	\$25.00
Car insurance	\$98.76

<b>Barb's Monthly Income and Expenses</b>	
<i>Income</i>	<i>Expenses</i>

## SAVINGS

So far, we have not looked at how the income and expenses match each other within a month. Many people want to save some money for a rainy day, or for a special purchase. To do this, you must set aside a certain amount of your income as savings each month in order to reach your goal.

Example 1: Jenny wants to save for a summer holiday in July. She has carefully itemized her expenses in the table on the right. Her monthly income is \$2275.00. How much can Jenny save this month?

Rent	\$775.00
Utilities	\$175.00
Car Insurance	\$123.00
Car Loan	\$342.00
Cell Phone	\$42.00
Groceries	\$225.00
Gas	\$90.00
Entertainment	\$75.00
Miscellaneous	\$50.00

Solution: Add up Jenny's expenses and subtract this amount from her income. The extra is her savings.

Jenny's expenses are:

$$\$775 + \$175 + \$123 + \$342 + \$42 + \$225 + \$90 + \$75 + \$50 = \$1897$$

$$\text{Jenny's savings} = \$2275 - \$1897 = \$378$$

Example 2: Keenan's budgeted income and expenses are shown below. He wants to buy a new car in 12 months. Assuming Keenan saves any extra income that he has, how much money will he have for that new car in a year?

<i>Income</i>		<i>Expenses</i>	
Paycheque (semi-monthly)	\$675.00	Rent	\$525.00
Tutoring	\$310.00	Utilities	\$150.00
Paycheque (semi-monthly)	\$675.00	Car Insurance	\$123.00
		Gas	\$75.00
		Groceries	\$185.00
		Cell phone	\$50.00
		Entertainment	\$50.00
		Gym membership	\$25.00
		Miscellaneous	\$30.00

Solution: Add up Keenan's expenses and subtract this amount from his income. The extra is his savings. Multiply this amount by 12 months.

$$\text{Keenan's income is: } \$675 + \$310 + 675 = \$1660$$

Keenan's expenses are:

$$\$525 + \$150 + \$123 + \$75 + \$185 + \$50 + \$50 + \$25 + \$30 = \$1213$$

$$\text{Keenan's monthly savings} = \$1660 - \$1213 = \$447$$

$$\text{Keenan's yearly savings are: } \$447 \times 12 = \mathbf{\$5364.00}$$

## **ASSIGNMENT 6 - SAVINGS**

- 1) Terry has made a list of her expenses and income for a month. She has an unexpected vet bill for her dog that costs \$267.45. Does she have enough income to cover this bill?

<i>Income</i>		<i>Expenses</i>	
Paycheque (week 1)	\$450.00	Rent	\$750.00
Paycheque (week 2)	\$450.00	Groceries	\$235.00
Paycheque (week 3)	\$450.00	Renter's insurance	\$82.00
Paycheque (week 4)	\$450.00	Clothing	\$75.00
		Entertainment	\$85.00
		Utilities	\$105.00
		Transportation	\$250.00

- 2) JD has made the following list of his income and expenses for one month.

<i>Income</i>		<i>Expenses</i>	
Paycheque (semi-monthly)	\$425.00	Rent	\$425.00
Tips	\$180.00	Loan payment	\$90.00
Yard and house work	\$145.00	Transportation	\$175.00
Tutoring	\$125.00	Clothing	\$75.00
Paycheque (semi-monthly)	\$425.00	Groceries	\$185.00
		Cell phone	\$35.00
		Entertainment	\$55.00
		Miscellaneous	\$25.00

- a) How much will JD be able to save each month?
- b) After 6 months, JD wants to buy a big screen TV that costs \$1200. Will he have enough money saved to do this?

- 3) Gavin has the following monthly income and expenses. Any extra income is put into his savings.

<i>Income</i>		<i>Expenses</i>	
Paycheque (semi-monthly)	\$1167.48	Rent	\$725.00
Paycheque (semi-monthly)	\$1167.48	Utilities	\$150.00
		Loan payment	\$155.00
		Renter's insurance	\$35.00
		Groceries	\$285.00
		Transportation	\$235.00
		Entertainment	\$100.00
		Clothing	\$100.00
		Charitable donation	\$50.00
		Miscellaneous	\$50.00
TOTAL		TOTAL	

After 4 months, Gavin wants to buy a new bike that costs \$1600. Will he have enough saved to pay cash?

- 4) Sylvia regularly saves \$150.00 per month since she began working 10 months ago. She is planning a trip in 8 months that will cost her \$2900. How much more than \$150.00 must she save for each of the remaining 8 months so that she will have enough money for her trip?

## **CREATING A BUDGET**

So far in this unit, we have looked at classifying expenses and income. Now it is time to figure out what to do with the expenses and income in order to create a budget.

Remember that a **budget** is a balanced statement of expected income and expenses.

In order to create a personal budget that is accurate, you need to have a valid idea of your total income and expenses. It is necessary to keep track of these for a few months in order to estimate what you will spend and in the future. Looking at your financial transactions on a bank statement or online is a good way to do this. Saving receipts can also help you track your spending.

Because a budget is just a plan for the future, it is truly just an estimate because you cannot know exactly what your expenses will be in the future – remember those unexpected expenses that come up? *It is a good idea to **underestimate** your income and **overestimate** your expenses to make sure that you can cover your bills.*

If your income is greater than your expenses in a given month, you have a **surplus**. If this is the case, in your budget, classify the extra money as “Savings” or something else that is reasonable. Budgets always balance so there cannot be “money leftover!”

On the other hand, if your expenses are more than your income, you have a **deficit**. If this happens, you need to adjust your spending to reduce your expenses in some area so your budget will balance. If you have savings, you could also transfer some money into your budget as income from your savings to balance your budget, but this is a last resort for unexpected, irregular expenses.

When preparing your budget, first break down your expenses into categories that can include several transactions. Examples are like the ones you have previously worked with: food/groceries, transportation, entertainment, clothes, utilities, etc. Other categories may only have one transaction, like rent or loan payment, but are necessary to include.

Once you have your expense categories, find the monthly average for all the variable expenses. Fixed expenses will remain the same every month and are easier to identify. Once the monthly averages are found, bump these up to a round number (one with zeros) so you are overestimating what you might spend. This gives a little bit of extra budget room in case your expenses are a bit higher than predicted.

The same process should be done with any variable income.

Example 1: Alisha wants to set up a budget and has kept track of her expenses for the last 4 months. Using the information in the chart below, calculate Alisha's average monthly expenses for each category.

<i>Item</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>
Rent	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00
Utilities	\$150.00	\$125.00	\$155.00	\$150.00	\$175.00
Cell phone	\$42.50	\$42.50	\$42.50	\$42.50	\$42.50
Groceries	\$265.00	\$290.00	\$195.00	\$220.00	\$200.00
Car payment	\$155.00	\$155.00	\$155.00	\$155.00	\$155.00
Gas	\$85.00	\$130.00	\$105.00	\$105.00	\$165.00
Car insurance	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Renter's insurance	\$89.00	\$89.00	\$89.00	\$89.00	\$89.00
Clothing	\$225.00	\$0.00	\$58.00	\$167.00	\$115.00
Entertainment	\$85.00	\$55.00	\$250.00	\$105.00	\$275.00
Miscellaneous	\$45.00	\$77.00	\$39.00	\$105.00	\$50.00

Solution: For each variable expense category, calculate the average by adding up the amounts and dividing by 5 months.

Fixed expenses are Rent, Cell phone, Car payment, Car insurance, and Renter's insurance. These have values that do not change each month.

Variable expenses are as follows:

Utilities:  $\$150.00 + \$125.00 + \$155.00 + \$150.00 + \$175.00 = \$755.00 \div 5 = \mathbf{\$151.00}$

Groceries:  $\$265.00 + \$290.00 + \$195.00 + \$220.00 + \$200.00 = 1170.00 \div 5 = \mathbf{\$234.00}$

Gas:  $\$85.00 + \$130.00 + \$105.00 + \$105.00 + \$165.00 = 590.00 \div 5 = \mathbf{\$118.00}$

Clothing:  $\$225.00 + \$0.00 + \$58.00 + \$167.00 + \$115.00 = 565.00 \div 5 = \mathbf{\$113.00}$

Entertainment:  $\$85.00 + \$55.00 + \$250.00 + \$105.00 + \$275.00 = 770.00 \div 5 = \mathbf{\$154.00}$

Miscellaneous:  $\$45.00 + \$77.00 + \$39.00 + \$105.00 + \$50.00 = 316.00 \div 5 = \mathbf{\$63.20}$



Example 2: Based on Alisha's average monthly expenses, calculated in the example on the preceding page, and her salary of \$2067.45 per month, create a realistic budget for Alisha.

Solution: To create a realistic budget for Alisha, overestimate her variable expenses and underestimate her salary. Fixed expenses remain the same.

Fixed expenses are as follows:

Rent: **\$525.00**  
 Cell phone: **\$42.50**  
 Car payment: **\$155.00**  
 Car insurance: \$125.00  
 Renter's insurance: \$89.00

Variable expenses are as follows:

Utilities: **\$151.00**  
 Groceries: **\$234.00**  
 Gas: **\$118.00**  
 Clothing: **\$113.00**  
 Entertainment: **\$154.00**  
 Miscellaneous: **\$63.20**

Complete a chart as shown to overestimate expenses and underestimate salary, and calculate Alisha's total income and expenses.

<i>Alisha's Monthly Budget</i>			
<i>Income</i>		<i>Expenses</i>	
Paycheque (semi-monthly)	\$2000.00	Rent	\$525.00
		Utilities	\$155.00
		Cell phone	\$42.50
		Groceries	\$250.00
		Car payment	\$155.00
		Gas	\$125.00
		Car insurance	\$125.00
		Renter's insurance	\$89.00
		Clothing	\$120.00
		Entertainment	\$175.00
		Miscellaneous	\$75.00
<i>Total income</i>	<i>\$2000.00</i>	<i>Total expenses</i>	<i>\$1836.50</i>

Because Alisha's income is greater than her expenses, she has a surplus in her budget.

$$\text{Surplus} = \$2000 - \$1836.50 = \$163.50$$

Alisha can put this money in her savings.

## **ASSIGNMENT 7 – CREATING A BUDGET**

- 1) Tara and Donny want to create a budget to help control their spending. They have kept track of their expenses for the last 4 months as shown below.

<i>Item</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>
Mortgage	\$1550.00	\$1550.00	\$1550.00	\$1550.00
Utilities	\$175.00	\$175.00	\$175.00	\$175.00
Cell phone	\$95.00	\$95.00	\$95.00	\$95.00
Groceries	\$365.00	\$290.00	\$325.00	\$450.00
Gas	\$150.00	\$200.00	\$165.00	\$175.00
Car insurance	\$135.00	\$135.00	\$135.00	\$135.00
Car payment	\$355.00	\$355.00	\$355.00	\$355.00
Home insurance	\$133.00	\$133.00	\$133.00	\$133.00
Restaurant meals	\$145.00	\$65.00	\$80.00	\$120.00
Holiday saving	\$85.00	\$55.00	\$150.00	\$105.00
Clothing	\$425.00	\$375.00	\$0.00	\$90.00
Entertainment	\$100.00	\$150.00	\$75.00	\$125.00
Veterinarian bills	\$75.00	\$0.00	\$125.00	\$100
Miscellaneous	\$125.00	75.00	\$100.00	\$175.00

Calculate their average monthly expense for each category.

2) Mun He has kept track of her finances over the last 4 months. Her average income and expenses are shown in the chart below.

<b>Mun He's Monthly Income and Expenses</b>			
<i>Income</i>		<i>Expenses</i>	
Monthly Paycheque	\$1800.00	Rent	\$650.00
Tips	\$165.00	Utilities	\$125.00
		Groceries	\$250.00
		Transportation	\$125.00
		Entertainment	\$225.00
		Miscellaneous	\$425.00

a) Create a budget for Mun He. **Overestimate her expenses** to allow for unexpected occurrences. If there is a surplus, enter it as Savings. Use the chart below.

<b>Mun He's Budget</b>			
<i>Income</i>		<i>Expenses</i>	
Monthly Paycheque		Rent	
Tips		Utilities	
		Groceries	
		Transportation	
		Entertainment	
		Miscellaneous	
		Savings?	
Total income		Total expenses	

b) Mun He wants to buy a new big screen TV in 6 months. If costs \$1099.99. will she have enough money saved at that time?

3) Brenda earns \$3550.00 per month. She made the following list of her expenses.

<b>Expense</b>	<b>Amount</b>
Mortgage	\$1250 per month
Car insurance	\$125 per month
Car maintenance	\$550 per year
Gas	\$125 per month
Loan payment	\$175 per month
House repairs	\$950 per year
House taxes	\$4500 per year
House insurance	\$1725 per year
Gifts	\$500 per year
Charitable donations	\$450 per year
Groceries	\$450 per month
Clothing	\$125 per month
Season's skiing pass	\$650 per year
Entertainment	\$100 per month
Miscellaneous	\$150 per month

Create a **monthly** budget for Brenda. Read the expense table carefully as some are monthly and some are yearly expenses.

<b>Brenda's Monthly Budget</b>			
<i>Income</i>		<i>Expenses</i>	
Total income		Total expenses	

## **ANALYZING YOUR BUDGET**

So far, we have looked at tracking expenses and income, and creating budgets using past data. But if you use your data from the last 6 months or more, how will you know whether your actual income and expense over the next 6 months or a year will match what is in the budget? People often find that once they make a budget, they cannot stick to it, or they wish to change parts of it, or their situation changes and they need to make adjustments to their budget.

**Example 1:** Eric has budgeted to put \$25.00 a week into his savings. This represents 8% of his weekly income. What is Eric's weekly income?

**Solution:** Set up the proportion using English letters/words, the known ratio, and the unknown. Then Cross Multiply and Divide (CMD) to solve for the unknown. (See CMD handout if you are unfamiliar with this process.)

The English would be part and whole (or something similar)

$$\frac{\textit{part}}{\textit{whole}} = \frac{8}{100} = \frac{25}{x}$$

where 8 is 8% out of 100% and 25 is the amount put in savings out of his total weekly earnings of  $x$ .

$$\text{So } x = 100 \times 25 \div 8 = 312.5$$

Ben's weekly earnings are \$312.50

**Example 2:** Ben's annual savings are \$1575.00 and make up 4% of his net pay. He wishes to increase his savings to 11% of his net pay. How much would he save each year if he made this change?

**Solution:** Set up a proportion and Cross Multiply and Divide.

$$\frac{\textit{current}}{\textit{new}} = \frac{4}{11} = \frac{1575}{x}$$

$$\text{So } x = 1575 \times 11 \div 4 = 4331.25$$

Ben's new annual savings would be \$4331.25

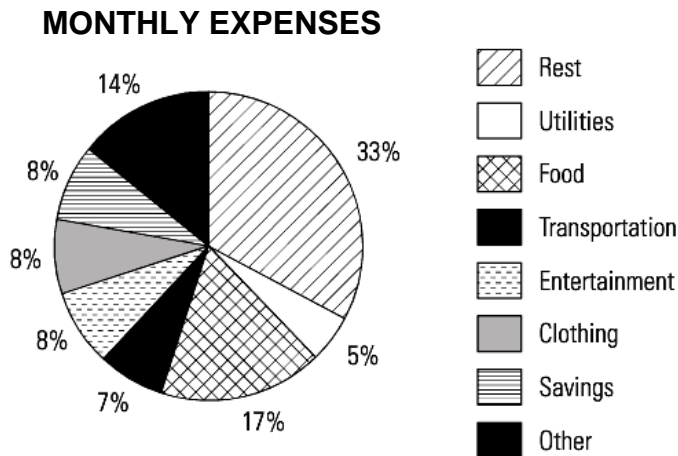
## **ASSIGNMENT 8 – ADJUSTING EXPENSES**

- 1) Paul has budgeted \$225.00 per month for groceries. If this represents 12% of his monthly income, what is his monthly income?
  
  
  
  
  
  
  
  
  
  
- 2) Gina saves \$135.00 per month. If her monthly income is \$2000, what percent of her income does she save each month?
  
  
  
  
  
  
  
  
  
  
- 3) Gurjinder's monthly Entertainment expense is \$275.00 which represents 16% of his budget. He would like to reduce this to 12%. How much will his new Entertainment expense be?
  
  
  
  
  
  
  
  
  
  
- 4) Louise saves 15% of her monthly salary of \$2475.00 each month. If she is saving for a trip next summer that costs \$3500, will she have enough saved after 8 months to pay for her trip?
  
  
  
  
  
  
  
  
  
  
- 5) Lena's earns \$450.00 per week. She gets a raise of 5%. She saves 13% each week.
  - a) What is her new salary?
  
  
  
  
  
  
  
  
  
  
  - b) How much will she now save each week?

## MORE ANALYZING YOUR BUDGET

Technology is very helpful in tracking actual versus budgeted amounts. Spreadsheets allow you to make a change of one expense and instantly see how it changes the other parts of the budget. Once the information is entered in a spreadsheet, it can be used to create a graph. A circle graph is a useful tool for analyzing budgets because it shows all the categories, and it is easy to see which make up the biggest expense.

Here is an example of a circle graph showing Monthly Expenses.



Example 1: Keisha has made a budget and researched spending guidelines for that area she lives in. These guidelines give a recommendation of about how much money you should spend in each category. Both tables are shown below.

<b>Expenses</b>	
Rent	\$425.00
Utilities	\$150.00
Groceries	\$250.00
Transportation	\$185.00
Entertainment	\$75.00
Clothing	\$125.00
Savings	\$50.00
Miscellaneous	\$30.00

<b>Spending Guidelines</b>	
Rent	25 – 35%
Utilities	5 – 10%
Groceries	5 – 15%
Transportation	5 – 15%
Entertainment	5 – 10%
Clothing	2 – 5%
Savings	5 – 15%
Miscellaneous	5 – 10%

What changes does Keisha need to make so that her spending falls in the guidelines?

Solution: Calculate the total Keisha spends each month and the percentage each expense represents. Then compare this to the guidelines Keisha researched.

Keisha's total expenses are:

$$\$425 + \$150 + \$250 + \$185 + \$75 + \$125 + \$50 + \$30 = \mathbf{\$1290.00}$$

Rent:  $425 \div 1290 \times 100 = 32.9 = 33\%$

Utilities:  $150 \div 1290 \times 100 = 11.6 = 12\%$

Groceries:  $250 \div 1290 \times 100 = 19.3 = 19\%$

Transportation:  $185 \div 1290 \times 100 = 14.3 = 14\%$

Entertainment:  $75 \div 1290 \times 100 = 5.8 = 6\%$

Clothing:  $125 \div 1290 \times 100 = 9.6 = 10\%$

Savings:  $50 \div 1290 \times 100 = 3.8 = 4\%$

Miscellaneous:  $30 \div 1290 \times 100 = 2.3 = 2\%$

Keisha is spending too much on her utilities, groceries, and clothing. These are expenses that she can easily modify by changing her habits. She is not spending enough on her savings. In order to meet the guidelines that Keisha has found, she will need to adjust these expenses. If she reduces her spending in the first three areas, she will be able to increase her savings.

“Miscellaneous” is not something that requires changes even though it is not within the guidelines.

Example 2: Jenny's expenses are listed in the Table below. Create a circle graph to show Jenny's spending.

<b>Jenny's Expenses</b>	
Rent	\$775.00
Utilities	\$175.00
Car Insurance	\$123.00
Car Loan Payment	\$342.00
Cell Phone	\$42.00
Groceries	\$225.00
Gas	\$90.00
Entertainment	\$75.00
Miscellaneous	\$50.00

Solution: Step 1: Calculate the total of Jenny's expenses by adding the expense together.

Jenny's total expenses are:

$$\$775 + \$175 + \$123 + \$342 + \$42 + \$225 + \$90 + \$75 + \$50 = \mathbf{\$1897.00}$$



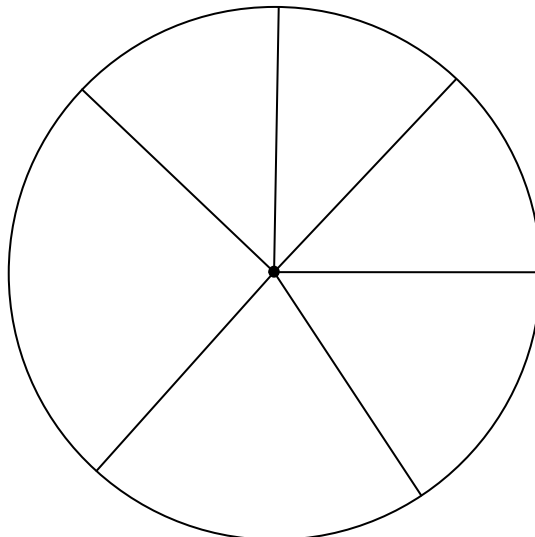
Step 2: Calculate the percentage each expense represents. Divide each amount by the total and multiply by 100 to get a percentage. Round each answer to the closest whole number.

Rent:  $775 \div 1897 \times 100 = 40.85 = 41\%$   
 Utilities:  $175 \div 1897 \times 100 = 9.22 = 9\%$   
 Car insurance:  $123 \div 1897 \times 100 = 6.48 = 6\%$   
 Car Loan:  $342 \div 1897 \times 100 = 18.02 = 18\%$   
 Cell Phone:  $42 \div 1897 \times 100 = 2.21 = 2\%$   
 Groceries:  $225 \div 1897 \times 100 = 11.86 = 12\%$   
 Gas:  $90 \div 1897 \times 100 = 4.74 = 5\%$   
 Entertainment:  $75 \div 1897 \times 100 = 3.95 = 4\%$   
 Miscellaneous:  $50 \div 1897 \times 100 = 2.63 = 3\%$

Step 3: Calculate the angle each percentage will represent on the graph. To do this, divide each percent by 100 to get as a decimal, and multiply by  $360^\circ$  because there are  $360^\circ$  in a circle! Round each answer to the closet whole degree.

Rent:  $41\% \div 100 \times 360 = 147.6 = 148^\circ$   
 Utilities:  $9\% \div 100 \times 360 = 32.4 = 32^\circ$   
 Car insurance:  $6\% \div 100 \times 360 = 21.6 = 22^\circ$   
 Car Loan:  $18\% \div 100 \times 360 = 64.8 = 65^\circ$   
 Cell Phone:  $2\% \div 100 \times 360 = 7.2 = 7^\circ$   
 Groceries:  $12\% \div 100 \times 360 = 43.2 = 43^\circ$   
 Gas:  $5\% \div 100 \times 360 = 18^\circ$   
 Entertainment:  $4\% \div 100 \times 360 = 14.4 = 14^\circ$   
 Miscellaneous:  $3\% \div 100 \times 360 = 10.8 = 11^\circ$

Step 3: Plot these angles in the circle provided using a protractor as taught in Unit 1.



## **ASSIGNMENT 9 – ADAPTING BUDGETS**

- 1) Lisa earns \$2867.00 a month and has been given the spending guidelines shown in the chart below. Lisa spends \$1000.00 per month for her rent and \$190.00 per month for her utilities. She wants to save 15% of her monthly income, and pay off her loans as fast as possible.

<b><i>Spending Guidelines</i></b>	
Rent	30 – 35%
Utilities	5 – 10%
Groceries	12 – 18%
Transportation	8 – 12%
Loan Repayment	0 – 12%
Savings	At least 10%
Recreation	6 – 12%
Health and personal	8 – 15%

Create a reasonable budget for Lisa. Show any calculations completed.

<b>Lisa's Budget</b>	
<b><i>Expenses</i></b>	
Rent	\$1000.00
Utilities	\$190.00
Groceries	
Transportation	
Loan Repayment	
Savings	
Recreation	
Health and personal	

2) Sarah has made a budget and researched spending guidelines for that area she lives in. These guidelines give a recommendation of about how much money you should spend in each category. Both tables are shown below.

<b>Expenses</b>	
Rent	\$840.00
Groceries	\$175.00
Transportation	\$125.00
Entertainment	\$175.00
Clothing	\$175.00
Loan Payment	\$275.00
Savings	\$75.00
Miscellaneous	\$150.00
<i>Total Expenses</i>	

<b>Spending Guidelines</b>	
Rent	30 – 35%
Groceries	8 – 15%
Transportation	8 – 12%
Entertainment	8 – 12%
Clothing	8 – 12%
Loan Repayment	0 – 12%
Savings	At least 10%

What changes does Sarah need to make so that her spending falls in the guidelines?

2) The chart below shows Shawn's expenses for the last month.

<b>Shawn's Monthly Budget</b>			
<i>Income</i>		<i>Expenses</i>	
Paycheque	\$1275.00	Rent	\$1050.00
Paycheque	\$1275.00	Utilities	\$175.00
Tips	\$200.00	Phone, cable, internet	\$175.00
		Groceries	\$350.00
		Transportation	\$150.00
		Entertainment	\$125.00
		Clothing	\$175.00
		Charitable donation	\$100.00
		Medical/Health	\$150.00
		Savings	\$200.00
		Miscellaneous	\$100.00
<i>Total income</i>		<i>Total expenses</i>	

a) Is his budget balanced? Show your work as proof.

b) Create a circle graph of Shawn's spending. Show your calculations.

