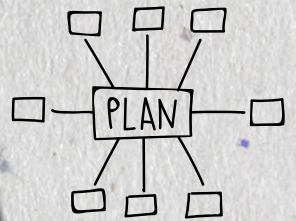
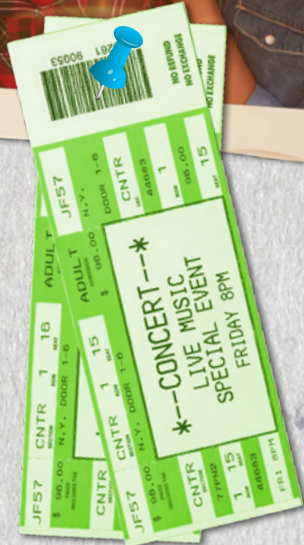




# BUILDING YOUR FUTURE

## Establishing a Foundation

A Student and Teacher Resource for Financial Literacy Education





## About This Book

Personal finance is part knowledge and part skill — and the *Building Your Future* book series gives you a foundation in both. It addresses knowledge by covering essential financial principles for establishing a foundation in Book 1, paving the road to success in Book 2, expanding responsibilities in Book 3, and accumulating wealth in Book 4. The series also addresses the mathematical skills that you need to live a financially healthy life. You will be able to see the real-world consequences of mastering your finances, which should help you understand the relevance of good mathematical skills. We hope you enjoy this *Building Your Future* book series.

## About The Actuarial Foundation

The Actuarial Foundation is a 501(c)(3) nonprofit organization. The mission of The Actuarial Foundation is to enhance math education and financial literacy through the talents and resources of actuaries. Please visit the Foundation's website at [www.actuarialfoundation.org](http://www.actuarialfoundation.org) for additional educational materials.



*Please Note:* If you are reading this book in PDF on a computer, you can click on **highlighted links** to access online resources. You can also mouseover **bolded terms** for a pop-up definition. Definitions for all bolded terms can also be found in the glossary at the back of the book. You will need a calculator to complete the activities, which all provide spaces for you to type in your answers.

It is possible that some of the online resource links provided here may be renamed or removed by their hosts in the future. A quick internet search should lead you to similar online resources that you can use to complete the activities.

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### What is an Actuary?

Actuaries are the leading professionals in finding ways to manage risk. It takes a combination of strong math and analytical skills, business knowledge, and understanding of human behavior to design and manage programs that control risk. *US News and World Report*, the *Jobs Rated Almanac*, *CNN Money*, and others all agree: few other occupations offer the combination of benefits that an actuarial career can offer. To learn more about the profession, go to [www.BeAnActuary.org](http://www.BeAnActuary.org).







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# Introduction: Money Matters

Most people need help with money management. One recent survey found that more than 60% of Americans don't have enough savings to cover a \$1,000 emergency.<sup>1</sup> That may sound like a lot of money, but it's barely enough for a root canal or major car repair. Another study calculates that annual consumer debt in the U.S. was only \$160 per person in 1952, which would be worth about \$1,500 today. Comparatively, the average American's debt in 2018 was \$11,944 – that's about 7.5 times greater!<sup>2</sup> To put it another way, in 1952, it would have taken 213 hours of work at the federal minimum wage to pay off the average person's debt. In 2018, it would take more than 1,650 hours of work (at today's minimum wage) to pay off the average American's debt. Assuming a 40-hour workweek, that's 5 weeks vs. 41 weeks.

The *Building Your Future* program is designed to help you reverse these trends by teaching you the basics of personal finance and how to make smart money decisions, so you can create the best possible outcomes for yourself and your family.

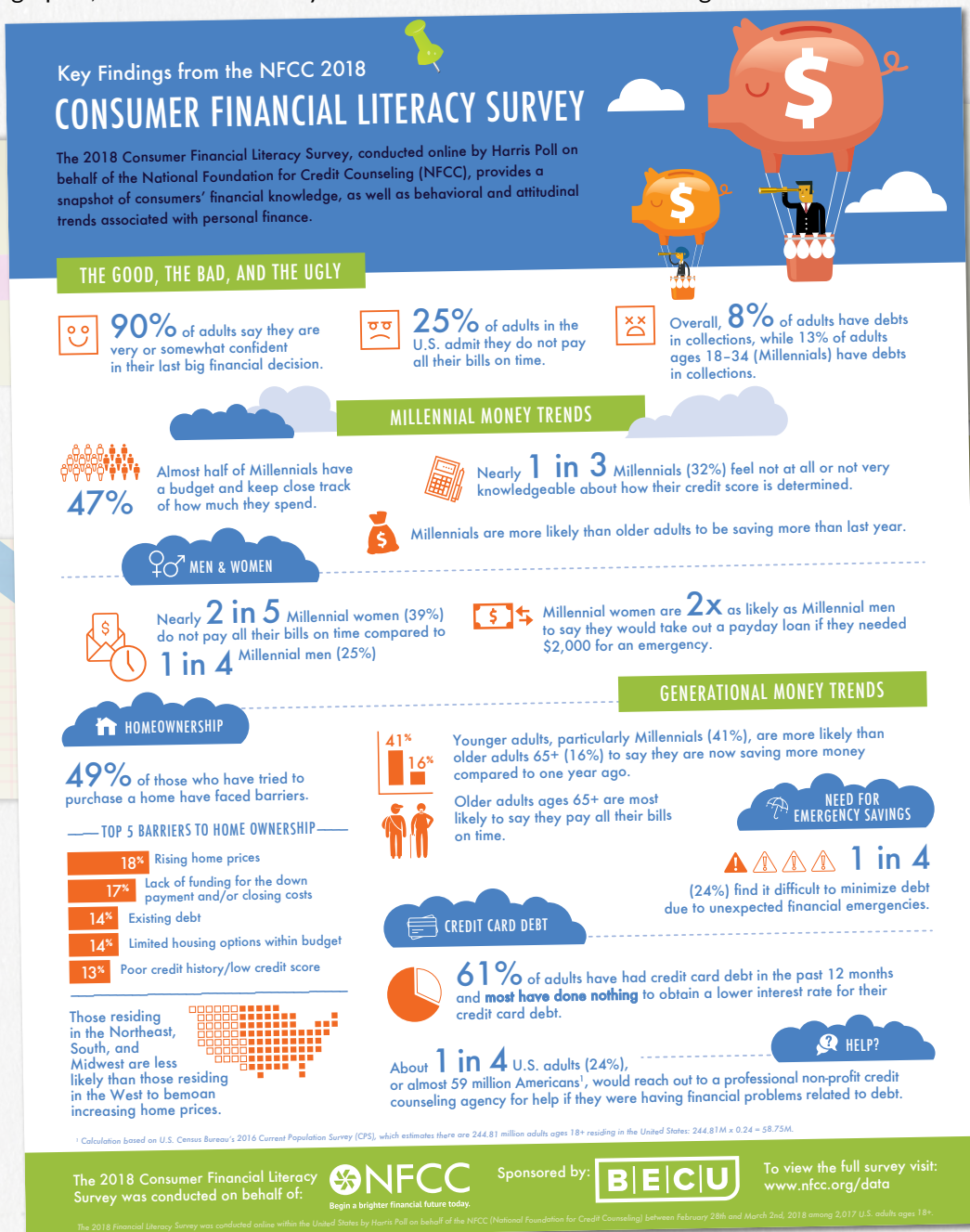
Look at this infographic, and discuss it with your classmates. Here are some things to think about:

Are there any statistics that surprise you?

How do you think these statistics compare to those of past years? Why?

How prepared do you feel for managing your money and planning for the future?

What do you think you need to know in order to achieve financial health?



<sup>1</sup> [www.cnbc.com/2018/01/18/few-americans-have-enough-savings-to-cover-a-1000-emergency.html](http://www.cnbc.com/2018/01/18/few-americans-have-enough-savings-to-cover-a-1000-emergency.html)  
<sup>2</sup> [www.money-zine.com/financial-planning/debt-consolidation/consumer-debt-statistics](http://www.money-zine.com/financial-planning/debt-consolidation/consumer-debt-statistics)

Image source: [nfcc.org/wp-content/uploads/2018/04/18.03.30-Financial-Literacy-Infographic.jpg](http://nfcc.org/wp-content/uploads/2018/04/18.03.30-Financial-Literacy-Infographic.jpg)



# CHAPTER 1: Spending Wisely



## Did You Know?

**Research shows that teens spend about 20% of their money on food, and another 20% on clothing.<sup>3</sup>**

Have you ever run out of money before receiving your allowance or paycheck and wondered how it happened? Do you know how much you spend per month on coffee outings or vending machine snacks? Have you ever tried to save up for a big purchase, like a car? If you answered yes to any of these questions, then this chapter is for you.

Living within your means — spending no more than you have available from your income — can be challenging. Understanding the difference between a want and a need, carefully budgeting how money is spent, and establishing and maintaining a good credit rating are all essential life skills. In this chapter, you'll take the first step toward sound financial health, as you learn to set spending priorities and create a spreadsheet to plan income and expenses.

## Needs vs. Wants

Every day, consumers make choices about how they spend money. Everyone has certain **needs** that must be met in order to survive — living essentials such as food, water, and shelter; societal requirements like clothing and reliable transportation; and financial obligations such as taxes, loans, and insurance.

**Wants** are things that help you live more comfortably — convenience items, entertainment, and leisure activities. For example, while you need clothing, you don't *need* to wear expensive designer jeans. Food is a need, but dining out at a restaurant is typically a want.

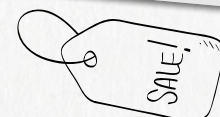
Understanding the difference between needs and wants — and planning spending accordingly — is an essential step in smart spending. Remember to allocate money toward needs first, and then you can use what is left over to cover your wants.

<sup>3</sup> <https://www.marketingcharts.com/demographics-and-audiences-80708>

## Total Cost

The next step toward understanding how you spend money is to think about the **total cost** of the items you buy and activities you participate in. For example:

- If you buy an expensive computer or smartphone, purchasing insurance will increase your monthly bills but could save you a lot of money in the long run.
- Certain sports require a long list of equipment. For a daytrip to go snowboarding, for example, you'll need to factor in the cost of a lift ticket, equipment rentals, gloves, goggles, food at the resort, and transportation to the mountain, etc.
- For services such as haircuts, it's customary to leave a tip of a percentage of the cost. If the cut costs \$25 and you leave a 20% tip, your total is \$30.





## Taxes

Nearly everything we purchase is subject to some sort of **sales tax**. When you buy a book for \$13.99, your total cost will be more than \$13.99 — a percentage of the sale price is added on in the form of a tax. The tax rate varies from place to place, but it is not unusual to pay 5-10% in sales tax.

To calculate the amount of sales tax due on an item, multiply the cost of the item by the tax rate. Then, add this amount to the item's cost. Using the book mentioned above as an example, this formula would work as follows:

$\$13.99$  (cost of book)  $\times$  5% (sales tax rate) =  $\$0.70$  (amount of sales tax due)

$\$13.99$  (cost of book) +  $\$0.70$  (sales tax) =  $\$14.69$  (total cost to purchase the book)

Certain products and services have higher tax rates. These include tobacco products, alcohol, gasoline, hotels, and sometimes restaurants. This higher tax rate is often because of an **excise tax** charged for a particular item. Sometimes an excise tax is added to the price of an item when you check out at the register, and sometimes it is built into the price. For example, there is a federal excise tax of 18.4 cents per gallon of gas, regardless of the price of gas within the specific state. This tax is built into the price of gas at the pump.



## Long-term Value

Another element of smart spending is to get the most **value** for your money. Buying things on sale, and comparing costs between similar items can add up to a lot of savings. Remember that value isn't just the price you pay at the register. It's also important to consider the true cost of an item over time. Here are a few things to think about:

- When comparing items that you use and repurchase frequently, look at the **unit cost** to determine which is the better price. For example, a gallon of milk costs \$3.69, while a quart is only \$1.99. But a gallon of milk is the equivalent of 4 quarts! If you divide the price by the number of units (in this case, quarts), you can get the unit cost:



$\$3.69 \div 4 = \$0.92$  per quart



$\$1.99 \div 1 = \$1.99$  per quart

If you drink milk consistently, buying it by the quart instead of the gallon will cost you more than double!

- When purchasing items that you plan to keep for a long time, buy the best **quality** you can afford. That doesn't mean you should spend 6 months' worth of paychecks on a designer handbag. But a \$200 purse that lasts 5 years will cost less over time than a \$35 purse that falls apart in 6 months.






# Activity 1


## NEEDS VS. WANTS



Needs and wants can vary from person to person: someone who works remotely may need internet access at home, but free WiFi at the library may be just enough for a retiree. Read through the following list and decide whether you think each item is a need or a want for you.

Smart financial planning means making sure your needs are taken care of first and using what's left over for your wants. In the table below, make a list of your six most important needs and wants and how much you spend on them each month.

Expense 	Need	Want
Health insurance		
The latest iPhone		
A mobile phone		
Spotify subscription		
Car payment		
Tickets for a music festival		
Application fees for post-secondary education		
Gym membership		
Haircut		
Dry cleaning		
New cleats for soccer		
Childcare		
Buying coffee during work breaks		
Donation to a local charity		

Need	Expense/ Month	Want 	Expense/ Month
	\$		\$
	\$		\$
	\$		\$
	\$		\$
	\$		\$
	\$		\$

Were there any items that you weren't sure about? Choose one of the items that you feel might be a "gray" area and explain why you think it is more of a need or a want:

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## Gifts and Charitable Giving

It may feel really good to donate to the local food pantry or to send Aunt Rose a beautiful birthday gift, but what part does "giving" play in your budget? Is it an obligation as a member of society, or is it something that's nice to include if you have extra money? Write a short paragraph on whether you think gifts and donations to charity are "needs" or "wants" and why. Keep in mind that charitable giving may be tax deductible.

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# Activity 2

## PART 1: DETERMINING COSTS



Answer the following questions to practice stretching your dollar and setting realistic spending expectations. Use the data below to determine the total cost of each item.

1. You purchased a new pair of shoes for \$34.99 and the sales tax rate was 7.5%.

Item cost \$ \_\_\_\_\_ x Sales tax rate \_\_\_\_\_ % = Amount of sales tax \$ \_\_\_\_\_

Item cost \$ \_\_\_\_\_ + Amount of sales tax \$ \_\_\_\_\_ = Total cost \$ \_\_\_\_\_

2. You purchased a bicycle for \$199.99 and the sales tax rate was 6.75%.

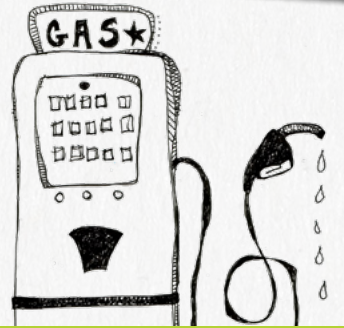
Item cost \$ \_\_\_\_\_ x Sales tax rate \_\_\_\_\_ % = Amount of sales tax \$ \_\_\_\_\_

Item cost \$ \_\_\_\_\_ + Amount of sales tax \$ \_\_\_\_\_ = Total cost \$ \_\_\_\_\_

3. You purchased 14.75 gallons of gasoline at \$2.29 per gallon. If the excise tax (included in the price of a gallon of gas) was 18.4 cents per gallon, what is the total amount of excise tax you paid?

Gallons of gas \_\_\_\_\_ x Excise tax per gallon \$ \_\_\_\_\_ = Total tax \$ \_\_\_\_\_

What if you had paid \$3.59 per gallon of gas? How would this affect the amount of excise tax paid? \_\_\_\_\_



4. You would like to go to the beach from Saturday to Sunday and stay overnight at a hotel. You already have a bathing suit and flip flops, but will need to purchase sunscreen for \$7.99 and a towel for \$12.99 (sales tax is 5%). The hotel room costs \$89, plus a 3% excise tax, and will be divided among 4 friends. You will also need to pay for 4 meals, including tips, for a total of \$60, and a beach pass for \$3 each day. If your budget is \$150, how much money will you have left over for extra activities and souvenirs?

Sunscreen \$ \_\_\_\_\_

Towel \$ \_\_\_\_\_

Total \$ \_\_\_\_\_

Sales tax \$ \_\_\_\_\_

Total Cost \$ \_\_\_\_\_

Hotel \$ \_\_\_\_\_

Hotel excise tax x \_\_\_\_\_ %

Total \$ \_\_\_\_\_

Divided by friends ÷ \_\_\_\_\_

Total Cost \$ \_\_\_\_\_ each

One-day beach pass \$ \_\_\_\_\_

Days on beach x \_\_\_\_\_

Total Cost \$ \_\_\_\_\_

Meals & tips \$ \_\_\_\_\_



Combined Total Cost \$ \_\_\_\_\_

Total budget \$ \_\_\_\_\_

Money available for wants \$ \_\_\_\_\_





## Activity 2

### PART 2: COMPARING COSTS



For each question below, use a calculator to determine which is the more economical option.



1. You need a new bottle of conditioner.

**Option 1:** 2-pack of conditioner for \$40.00; each bottle is 16 ounces. No shipping or sales tax.

Price per 2-pack : (\$ \_\_\_\_\_ ÷ 2 bottles) ÷ \_\_\_\_\_ oz. = \$ \_\_\_\_\_ per oz.

**Option 2:** Individual bottle of conditioner; 16 ounces for \$25.95.

Price per bottle: \$ \_\_\_\_\_ ÷ \_\_\_\_\_ oz. = \$ \_\_\_\_\_ per oz.

Option \_\_\_\_\_ is more economical.

2. Your favorite online clothing store is offering a membership that allows you unlimited shipping throughout the year for a one-time flat rate of \$29.99. Typically, you pay \$3.99 shipping for each purchase you make. How many orders will you need to place in order for the membership to be worthwhile?

Flat rate \$ \_\_\_\_\_ ÷ Per-order rate \$ \_\_\_\_\_ = Base number of orders \_\_\_\_\_

It would be cheaper to \_\_\_\_\_.

3. You are moving out on your own and need to buy furniture for your apartment. You found a new couch that costs \$1,500 plus 7.5% tax and \$50 shipping, or a used couch that is 5 years old, for \$700 cash without tax, and it needs about \$200 worth of repairs and cleaning. Assuming that a couch lasts 15 years, which is the more economical purchase?

#### NEW

Price \$ \_\_\_\_\_

Tax x \_\_\_\_\_ %

Cost \$ \_\_\_\_\_

Shipping \$ \_\_\_\_\_

Total Cost \$ \_\_\_\_\_

Years remaining ÷ \_\_\_\_\_

Cost per year \$ \_\_\_\_\_

#### USED

Price \$ \_\_\_\_\_

Cleaning, etc. \$ \_\_\_\_\_

Total Cost \$ \_\_\_\_\_

Years remaining ÷ \_\_\_\_\_

Cost per year \$ \_\_\_\_\_

The \_\_\_\_\_ couch is the more economical option.





## Establishing a Plan

Making smart choices about how you spend your money is just a first step. To really take charge of your money, you need to carefully plan and track your spending with a **budget**. By writing down your income and **expenses** over a given period of time, you can make sure you don't spend more than you earn and focus on working toward goals, like saving money for your education or going on vacation.

To get started with a budget, you'll need to follow these steps:

1. *Set a Time Period.* We suggest focusing on one month, as most major expenses like rent and car payments are paid monthly.
2. *Estimate Your Income.* Add up all of the money you expect to receive, including **net pay** from a job, allowance, birthday gifts, etc.
3. *Estimate Your Expenses.* List what you expect to spend on all of your needs and obligations. Do you have a car payment or phone bill? Do you buy your own clothing?
  - Some expenses, like your car payment, are fixed, meaning they don't change month to month. These are simple to add in.
  - Other expenses, like clothing, may change from month to month. Try to go through old receipts or bank statements to estimate your spending. Once you've tracked your spending for a few months, you can update these monthly expenses with a more accurate figure.
4. *Set Savings Goals.* Once your needs are taken care of, set a monthly savings goal to put aside for big-ticket items you'll need down the road, or in case something unexpected happens.
5. *Fun Money.* Calculate how much money you have left and decide how you'd like to spend it – going out to eat, purchasing video games or makeup, joining the gym, etc.

Now you have a plan for your monthly spending. Next, you'll need to track and record how much you actually spend on each item during the month. Then, at the end of the month, you should calculate the difference between what you planned to spend and what you really spent, and use this information to adjust your expectations and spending habits from month to month.

Everyone's budget will look different, depending on his



### Net or Gross Pay?

Let's say you have a part-time job earning \$8 an hour and you will be working 20 hours per week. Your **gross pay** is \$160 – that is the amount of money you'd make if you got to keep it all. But all U.S. workers pay income taxes on their earnings. This is money given to the federal, state, or local government to pay for roads, police, and other services. Some workers also contribute a percentage of their pay toward retirement and health insurance. After all these deductions and taxes have been removed from the gross pay, what you have left is called **net pay**, which is the amount of money you will actually receive. Remember that your budget should be based on your net pay.

or her particular needs and wants. For example, you may have a car payment while your classmate is able to borrow a parent's vehicle and will only need to factor in the cost of gas. Someone else might need to purchase a bus pass or factor in the cost of Uber transportation.

Complete Activity 3 to see how budgeting works. Then download the budgeting template at [ymiclassroom.com/byf/byf\\_book1\\_budget\\_template.xlsx](https://www.yomiclassroom.com/byf/byf_book1_budget_template.xlsx) to get started creating your own budget.





## Activity 3

### ESTABLISHING A PLAN



Look at the sample budget below and fill in the missing information in the yellow boxes. As you read through, think about the many things you spend money on each week or month. Then answer the questions below.

1. What is the formula for calculating the ending monthly balance? \_\_\_\_\_  
\_\_\_\_\_
2. What would it mean if the ending monthly balance were a negative number? What could this person do to fix the problem? \_\_\_\_\_  
\_\_\_\_\_
3. Let's say this person needs to cut \$20 in spending from their budget. Suggest two different ways to achieve this. For each suggestion, you can change up to 3 line items, as long as the net change is \$20.

#### Suggestion 1:

- a. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_
- b. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_
- c. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_

#### Suggestion 2:

- a. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_
- b. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_
- c. Item: \_\_\_\_\_  
Old Budgeted Amount: \$ \_\_\_\_\_  
New Budgeted Amount: \$ \_\_\_\_\_

Category	Estimated Monthly Budget	Actual Monthly Budget	Difference
<b>INCOME</b>			
Gross Wages	\$270.00	\$280.00	\$10.00
Minus Taxes & Withholdings	-\$30.00	\$	-\$2.00
Allowance	\$25.00	\$25.00	\$0.00
Gifts & Other Income	\$0.00	\$35.00	\$35.00
Interest from Savings Account	\$5.00	\$4.00	-\$1.00
<b>INCOME SUBTOTAL</b>	\$270.00	\$312.00	\$
<b>EXPENSES</b>			
<b>Basic Living Expenses</b>			
Phone Bill	\$30.00	\$30.00	\$0.00
Utilities	\$10.00	\$9.00	\$1.00
Groceries/Snacks	\$15.00	\$12.00	\$3.00
<b>School</b>			
Books	\$55.00	\$45.00	\$10.00
Class Fees/Supplies	\$	\$20.00	-\$5.00
<b>Transportation</b>			
Gasoline	\$20.00	\$25.00	-\$5.00
Bus Pass	\$0.00	\$0.00	\$0.00
<b>Savings</b>			
Savings Contribution	\$10.00	\$10.00	\$0.00
<b>Giving</b>			
Charity	\$5.00	\$5.00	\$0.00
Gifts	\$10.00	\$10.00	\$0.00
<b>Shopping</b>			
Wardrobe Needs	\$40.00	\$35.00	\$5.00
Other Shopping	\$10.00	\$	\$10.00
<b>Entertainment</b>			
Dining Out	\$15.00		\$15.00
Sports/Gym Membership			\$0.00
Music/Videos	\$5.00		\$5.00
Hobbies	\$10.00		\$10.00
<b>EXPENSES SUBTOTAL</b>	\$250.00	\$201.00	\$49.00
<b>ENDING MONTHLY BALANCE</b>	\$20.00	\$111.00	\$91.00



# CHAPTER 2: Smart Saving

## Did You Know?

Over the past nearly 50 years, the personal savings rate in the U.S. has dropped from 12.9% in 1970 to only 2.4% in 2017.<sup>4</sup>

In the previous chapter, you learned the importance of budgeting, including setting aside money, or **saving** for larger expenses. The goal of saving is to provide funds for emergencies and short-term goals. In this chapter, you'll learn why and how a bank savings account can help you save.

Savings accounts offer several benefits:

1. *Your money is secure.* Money tucked away at home could be stolen, lost, or destroyed in a house fire. Most savings accounts are insured by a government agency, called the Federal Deposit Insurance Corporation (FDIC), that pays you back if something happens to your bank.
2. *You are less likely to spend your money on impulse.* Some savings accounts limit the number of withdrawals you can make. Some require you to keep a minimum balance.
3. *Your savings grow faster.* Money deposited in a savings account earns **compound interest**.

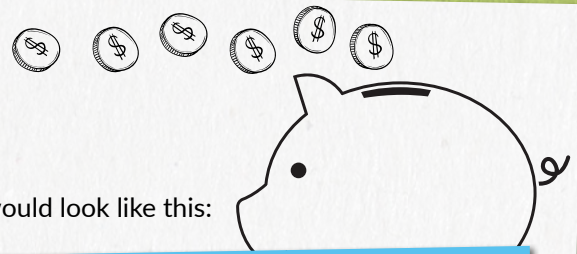
Picture this: You would like to go on a vacation, which costs \$1,000. So you begin stashing \$50 per week in a drawer. The money you put into the drawer is called a **deposit**. If you continue to deposit \$50 a week into your drawer, it will take you 20 weeks to save up enough to go on the trip.

Now, let's say that instead of putting the money into a drawer, you open a savings account at a bank. When you deposit money into a savings account, the bank can use your money to invest or make loans, which in turn helps the bank make more money. It pays you for this opportunity with something called interest. With **interest**, your savings actually grow.

## Compound Interest

The amount of interest you earn, called the **interest rate**, is calculated as a percentage of your **account balance**. Very simply: If you have an account balance of \$1,000 and an interest rate of 3%, you can expect to earn \$30 in interest.

<sup>4</sup> <https://www.statista.com/statistics/246234/personal-savings-rate-in-the-united-states/>



The equation would look like this:

Starting Account Balance x Interest Rate = Interest Earned

$$\$1,000 \times 0.03 = \$30$$

Account Balance + Interest Earned = Ending Account Balance

$$\$1,000 + \$30 = \$1,030$$

In reality, it's a little more complicated than that: Interest is paid periodically, instead of in one lump sum, and it builds on itself — or compounds — over time.

For example, let's say that the 3% interest rate quoted above is an annual percentage, meaning that your account earns 3% interest per year. And let's say that the payments are made monthly.

- The bank divides 3% by 12 months, to get 0.25%.
- Each month, your account earns 0.25% interest.
- As your account balance gradually increases each month, your ending balance grows along with the interest payment.

## Future Value, Present Value, and Discount Factor

In order to set and reach savings goals based on compound interest, you need to be able to compare the value of your money now, when you're putting it into the bank, to its value in the future, when you will take it out and use it.

It comes down to three fundamental concepts:

- **Future value** is the amount of money you expect to have in the future, *after* a period of saving. It includes your initial deposit plus all of the interest you will earn. So, if you have \$1,000 today and earn 0.25% interest per month over the next 12 months, the one-year future value of that \$1,000 investment is \$1,030.42. The two-year future value is \$1,061.76, because that is how much your \$1,000 will have grown into.





- **Present value** is the amount your money is worth now, or the amount you need to put away today in order to reach a certain value in the future. So, if your goal is to have \$1,030.42 in a year, and you will earn 0.25% interest per month, then you need to put \$1,000 into the account today.
- **Discount factor** is a little trickier. It is calculated by dividing the present value by the future value.
  - In our example,  $\$1,000 \div \$1,030.42 = .9705$ . Rounding off, the discount factor at 1 year is 97%. You could say that your money today is worth 97% of what it will be worth in the future.
  - But at 5 years, when the future value is \$1,161.62, the discount factor is .8609. In other words, the present value is only 86% of the future value at 5 years.
  - The key point to remember is that the lower the discount factor, the more your money has grown, and vice versa. This provides you with a tool to compare the growth of two accounts or to check incremental progress over time.
  - The discount factor is important because future value is impacted by more than just one factor – the interest rate, how often it is compounded, and the amount of time your money is in the account.

## The Rule of 72

The goal of saving money is to increase the worth of that savings. The **Rule of 72** helps you make quick, general decisions about the most effective way to save your money. You simply divide 72 by the annual interest rate to determine the total number of years it will take to double your money.

Let's go back to our original savings account of \$1,000. We saved this money at an annual rate of 3% interest. Using the Rule of 72, if you do the math, at a 3% annual interest rate it takes 24 years to double the initial \$1,000 savings.



There are a couple of caveats when using the Rule of 72.

- First, remember that it is an estimate, not an exact calculation. For example, if you are earning 8% interest on your money, the Rule of 72 indicates that it will take 9 years to double your money. When you calculate the exact amount of time it would take, the figure is actually 9.01 years – quite close to the estimated amount of time, but not exact.

- Next, note that the Rule of 72 works best when estimating for interest compounded annually at rates below 20%. For interest rates higher than 20%, its accuracy diminishes.

When you open a savings account at your bank, you may notice multiple options such as basic savings, CDs, and money market accounts. Each of these offers unique benefits for specific goals and savings terms.

## THE PROS AND CONS OF DIFFERENT SHORT-TERM SAVINGS OPTIONS

	PROS	CONS
SAVINGS ACCOUNT	<ul style="list-style-type: none"> <li>• Unlimited withdrawals.</li> <li>• Low minimum balance requirements.</li> <li>• Low or no fees.</li> <li>• Access to ATMs.</li> <li>• Compatible with electronic transfers.</li> </ul>	<ul style="list-style-type: none"> <li>• Very low interest rates.</li> <li>• Limited number of withdrawals per month.</li> </ul>
MONEY MARKET ACCOUNT	<ul style="list-style-type: none"> <li>• Relatively high rates of interest compared to savings and checking accounts.</li> <li>• Ability to write checks, make ATM withdrawals, and perform electronic transfers.</li> </ul> 	<ul style="list-style-type: none"> <li>• High minimum deposit required to avoid monthly fees.</li> <li>• Limited number of withdrawals per month.</li> </ul> 
CERTIFICATE OF DEPOSIT (CD)	<ul style="list-style-type: none"> <li>• Higher interest rates than savings accounts.</li> <li>• The interest rate doesn't change during the term of the account.</li> <li>• No fees when you hold your account to maturity.</li> </ul>	<ul style="list-style-type: none"> <li>• Penalties for early <b>withdrawal</b> make your money less accessible.</li> <li>• No access to your deposit through checks, ATM transactions, or electronic transfers.</li> </ul>

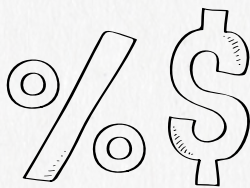
## Final Note:

People save first, and when they have saved sufficiently, then they may choose to take some of their savings and begin **investing** it. Book 4 in the *Building Your Future* series, titled *Accumulating Wealth*, will cover common types of investments, strategies, and other information.



# Activity 1

## PART 1: COMPOUND INTEREST



Compound interest can make your savings grow. Take a look at this spreadsheet to see how. Then answer the questions to learn more about how compound interest can give a real boost to your savings.

Month	Interest Rate	Beginning Balance	Interest Payment	Ending Balance
1	0.25%	\$1,000.00	\$2.50	\$1,002.50
2	0.25%	\$1,002.50	\$2.51	\$1,005.01
3	0.25%	\$1,005.01	\$2.51	\$1,007.52
4	0.25%	\$1,007.52	\$2.52	\$1,010.04
5	0.25%	\$1,010.04	\$2.53	\$1,012.57
6	0.25%	\$1,012.56	\$2.53	\$1,015.10
7	0.25%	\$1,015.09	\$2.54	\$1,017.64
8	0.25%	\$1,017.63	\$2.54	\$1,020.18
9	0.25%	\$1,020.18	\$2.55	\$1,022.73
10	0.25%	\$1,022.73	\$2.56	\$1,025.29
11	0.25%	\$1,025.28	\$2.56	\$1,027.85
12	0.25%	\$1,027.85	\$2.57	\$1,030.42
13	0.25%	\$1,030.42	\$2.58	\$1,033.00
14	0.25%	\$1,033.00	\$2.58	\$1,035.58
15	0.25%	\$1,035.58	\$2.59	\$1,038.17
16	0.25%	\$1,038.17	\$2.60	\$1,040.77
17	0.25%	\$1,040.77	\$2.60	\$1,043.37
18	0.25%	\$1,043.37	\$2.61	\$1,045.98
19	0.25%	\$1,045.98	\$2.61	\$1,048.59
20	0.25%	\$1,048.59	\$2.62	\$1,051.21
21	0.25%	\$1,051.22	\$2.63	\$1,053.84
22	0.25%	\$1,053.85	\$2.63	\$1,056.47
23	0.25%	\$1,056.48	\$2.64	\$1,059.11
24	0.25%	\$1,059.12	\$2.65	\$1,061.76
25	0.25%	\$1,061.77	\$2.65	\$1,064.41
26	0.25%	\$1,064.42	\$2.66	\$1,067.07
27	0.25%	\$1,067.08	\$2.67	\$1,069.74
28	0.25%	\$1,069.75	\$2.67	\$1,072.41
29	0.25%	\$1,072.42	\$2.68	\$1,075.09
30	0.25%	\$1,075.10	\$2.69	\$1,077.78
31	0.25%	\$1,077.79	\$2.69	\$1,080.47
32	0.25%	\$1,080.48	\$2.70	\$1,083.17
33	0.25%	\$1,083.18	\$2.71	\$1,085.88
34	0.25%	\$1,085.89	\$2.71	\$1,088.59
35	0.25%	\$1,088.60	\$2.72	\$1,091.31
36	0.25%	\$1,091.32	\$2.73	\$1,094.04



- The spreadsheet is based on the following formulas. Fill in the blanks:
  - Interest Payment = \_\_\_\_\_ x Beginning Balance
  - \_\_\_\_\_ = Beginning Balance + Interest Payment

• How would you express each of the statements above as a numerical formula for month 1 of the spreadsheet?

\_\_\_\_\_

\_\_\_\_\_
- Write a mathematical formula to show why the monthly interest rate is 0.25% if the annual percentage is 3%.
 

\_\_\_\_\_
- How did the beginning balance grow over the course of the first year? If 3% of \$1,000 is \$30, where did the extra 42 cents come from?
 

\_\_\_\_\_
- Compare the monthly interest payments at 12 months, 24 months, and 36 months. Why do the monthly interest payments increase over time?
 

\_\_\_\_\_
- How do these amounts illustrate the concept of compound interest?
 

\_\_\_\_\_
- Why would a bank choose to pay small payments over time in an amount that totals more than the 3% annual interest rate?
 

\_\_\_\_\_
- What would happen if the 3% annual percentage rate was compounded daily instead of monthly? What would the ending balance be after 1 year?
 

\_\_\_\_\_



# Activity 1

## PART 2: THE RULE OF 72

Use the Rule of 72 to practice estimating how long it will take to double your \$1,000 savings using various interest rates. If the account paid each annual interest rate listed below, how long would it take to double your savings?

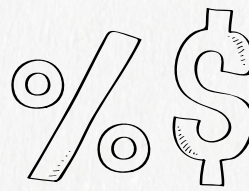
- 5% \_\_\_\_\_ years
- 8% \_\_\_\_\_ years
- 12% \_\_\_\_\_ years
- What conclusions can you draw about how interest rates affect the value of money over time?

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## Activity 2

### REAL WORLD PRACTICE

Up to this point, we've worked with an example that shows that you've made only one deposit and no withdrawals from your savings account. While savings accounts are designed to be a place to put money for a fairly long period of time before it is withdrawn, these types of accounts typically have some deposits and withdrawals over the course of a year. It is important to know that many banks limit the number of withdrawals that can be made from a savings account without incurring bank charges.

Let's use a spreadsheet to create a more realistic example of savings account activity and find out how that changes the end result. You can make your own spreadsheet based on the model below, or download a spreadsheet at [ymiclassroom.com/byf/byf\\_book1\\_savings\\_spreadsheet.xlsx](http://ymiclassroom.com/byf/byf_book1_savings_spreadsheet.xlsx).



A	B	C	D	E	F	G
Month	Interest Rate	Withdrawals	Beginning Balance	Interest Payment	Deposits	Ending Balance
1	0.25%	\$0.00	\$1,000	\$2.50	\$0.00	\$1,002.50

To calculate everything correctly, you will need these formulas:

- Interest Payment = Interest Rate x Beginning Balance
- Ending Balance = Beginning Balance + Interest Payment + Deposits
- Beginning Balance = Ending Balance from the previous month – Withdrawals from the current month

Use your spreadsheet to calculate the following scenario:

- You start your account with a beginning balance of \$1,000.
- You deposit \$320 monthly (half of the money you earn from your part-time job).
- In month 4 you withdraw \$45 to purchase a video game.
- In month 7 you deposit \$50 you received for your birthday.
- In month 10 you withdraw \$200 to pay a registration fee for an upcoming activity.

Now, answer each question below.

- How much is in your savings account at the end of 12 months?  
\$ \_\_\_\_\_
- How much interest did you earn over the course of the year?  
\$ \_\_\_\_\_
- Why is using a savings account better than using your dresser drawer for saving money?  
\_\_\_\_\_

### Independent Practice

Try this scenario on your own. You would like to purchase a reliable used car. You've done some research and learned that it will cost you approximately \$5,000 to buy the car. You earn \$688 a month from your part-time job. You've already managed to save \$250 at home, but you've been tempted to spend it. You've found a bank that will pay you 3.24% interest annually on a savings account, with interest payments made monthly. How long will it take you to save up for the car if you put half of your earnings into the savings account each month? Using what you have learned about savings accounts, create a spreadsheet that will show how you found your answer.

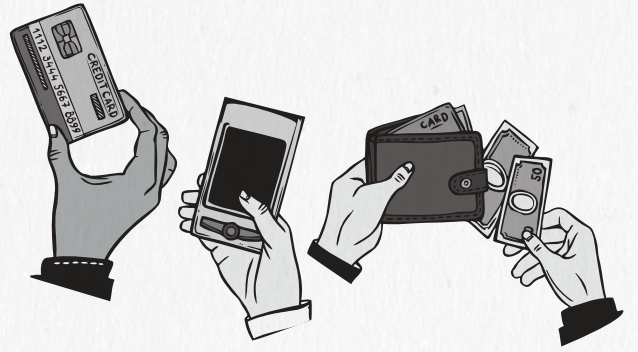




# CHAPTER 3: Many Ways to Pay

## Did You Know?

Forty-three percent of internet users, or about 63 million American adults, bank online. Mobile retail payments are projected to grow from \$180 billion in 2016 to \$410.5 billion by 2020.<sup>5</sup>



## Checking Account Basics

Learning to maintain a **checking account** is a necessary skill to master, even if you never actually write a **check**. Like savings accounts, checking accounts offer a secure place to keep your money. Unlike a savings account, the money in a checking account is meant to be used. These accounts provide a place to keep money for a short time before it is spent. For this reason, banks typically pay very little or no interest on checking accounts.

## Choosing a Checking Account

Modern checking accounts are very different from those your parents were introduced to when they were your age. Once upon a time, consumers would go into a bank branch to make deposits and withdrawals, and write paper checks to pay bills. Monthly statements were sent in the mail. Today's checking accounts allow you to purchase things instantly with a debit card, pay bills online from anywhere, and complete many transactions with a smartphone from the palm of your hand. The proper use of a checking account makes paying bills and tracking personal spending habits simple and convenient.

When setting up a checking account, it is important to read the fine print and pay attention to any fees and requirements associated with the account. Some banks require you to keep a **minimum balance**, which can be as much as \$1,000. If you fall below this amount at any time during the month, you may be charged a service fee and, if you have an interest-bearing checking account, you will not earn the interest you were expecting. It is also important to find out what kinds of perks you can get, such as free checks, a bonus for receiving your paycheck via direct deposit, and **overdraft protection**.

Banks also offer a variety of services along with a checking account, such as online bill pay and mobile banking. Look for options that fit your lifestyle. For example, some banks offer no-fee use of other banks' **ATM machines**. You might also want to consider using a bank that operates only online, without any physical locations. Many of these banks offer similar services to traditional banks, sometimes offering higher interest rates and lower fees in place of the ability to go into a branch office.

## Checkbooks

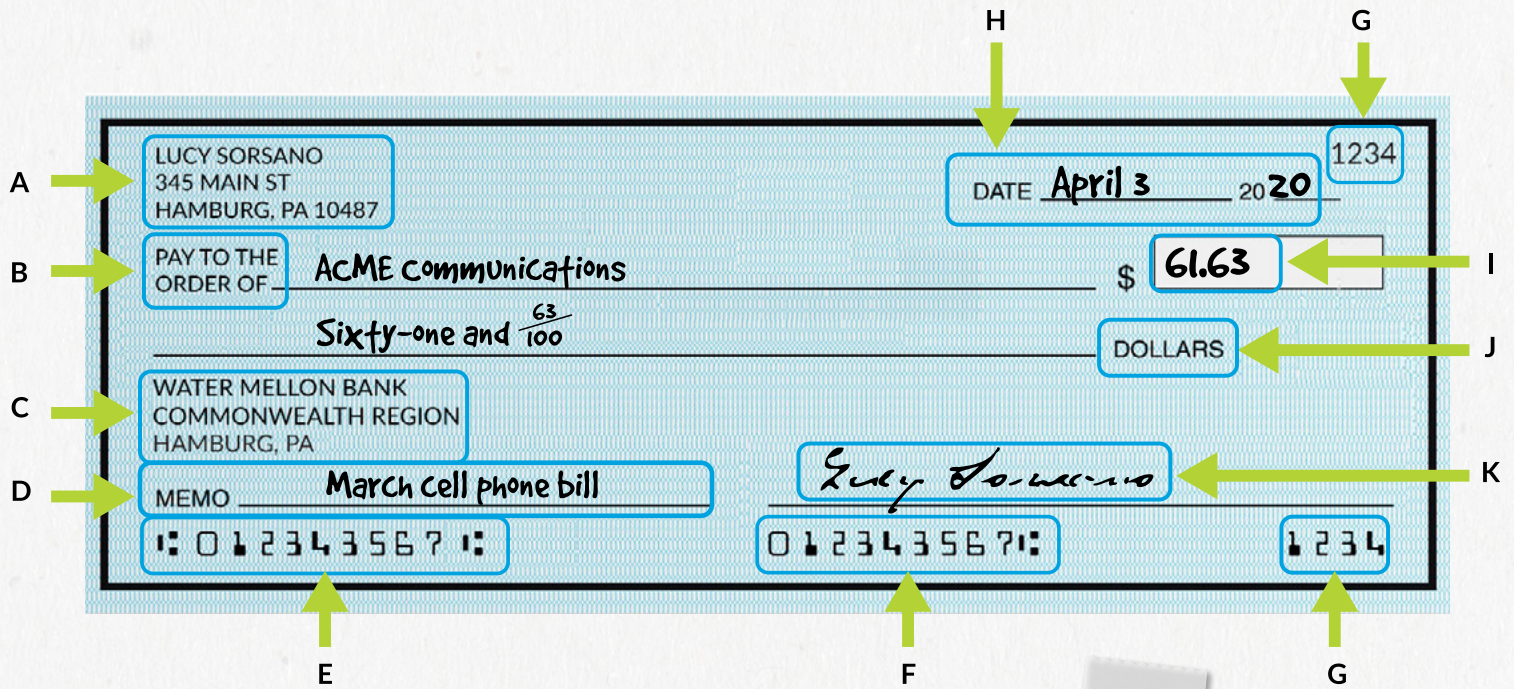
Paper checks are not as popular as they once were, but occasionally you may need to write a check to pay a bill or may receive a check as a gift or payment. Look at the sample check to learn the basics. Take particular note of items E and F; whether you use a checkbook or not, you may need the account number and routing number to identify your account for other purposes. For example, your employer can use this information to deposit your paycheck directly into your account.



<sup>5</sup> Board of Governors of the Federal Reserve System, March 2016 Report



# What's Included on a Check?



- A. Name and address of the account holder
- B. Name of the business or person receiving the payment
- C. Name of the bank where the account holder has the checking account
- D. Allows the account holder to record what the payment is for
- E. Routing number indicating the bank the check is drawn on

- F. Checking account number
- G. Check number
- H. Date that the check is being written
- I. Dollar amount being paid written as a number
- J. Dollar amount being paid written out in words
- K. Signature line where the account holder signs the check



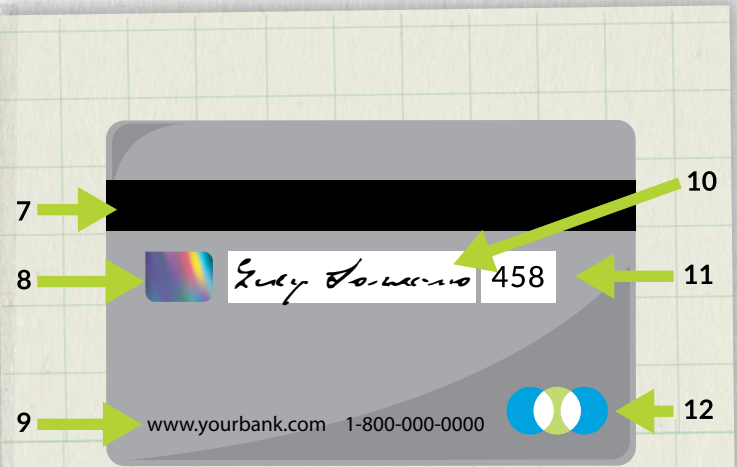
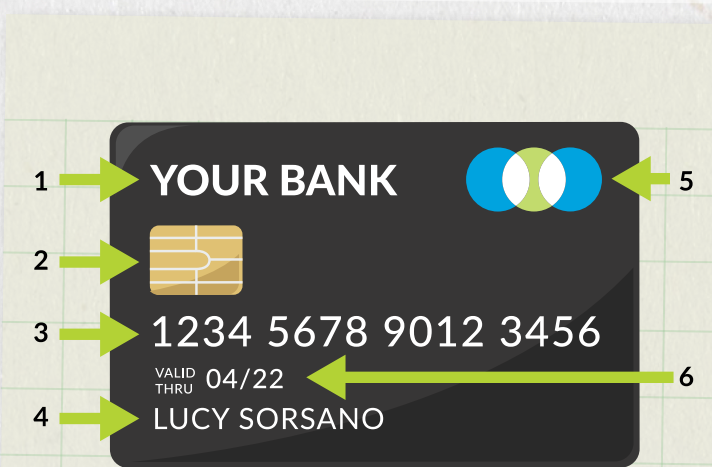
## Debit Cards

In addition to a checkbook, your bank will provide you with a **debit card** that you can use to pay bills, complete bank transactions, and make purchases. Many people prefer to use debit cards for day-to-day purchases because they provide much more convenience than carrying cash or writing a check. They also make it easier to track your spending.

Debit cards (see illustration below) resemble credit cards and can be used to make purchases anywhere credit cards are accepted as payment. They are typically swiped into or

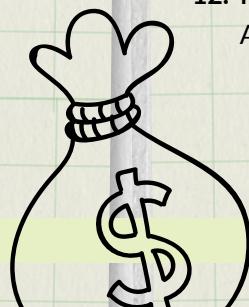
waved over an electronic reader. Many cards now have a special computer chip for increased security protection, and are inserted into the reader instead of swiped. Debit cards usually have a 3-digit code printed on the back in the space for your signature. This code is used as an added security measure for making purchases online or over the phone.

It is important to remember that when you use a debit card, money is automatically deducted from your bank account and transferred immediately to the merchant.



1. **Bank branding:** identifies your card issuer, which is typically either a bank name or retailer.
2. **Smart chips:** security feature on certain cards; a tiny metal processor that adds a single-use code to every transaction, making it harder for thieves to steal information.
3. **Card number:** 16-digit number (or 15 digits for American Express) used to identify your bank/credit account.
4. **Cardholder's name:** identifies the person to whom the card belongs, either the primary account holder or an authorized user who has permission to spend from the account.
5. **Payment network logo:** like MasterCard, Visa, etc. Some stores and websites will only accept certain types of cards.

6. **Expiration date:** cards will need to be replaced periodically; this tells you when. It is required for purchases you make online or over the phone.
7. **Magnetic stripe:** allows card readers to identify you and charge your account.
8. **Hologram:** may be printed on your card for added security as they are hard to counterfeit.
9. **Bank contact information**
10. **Signature panel:** your card must be signed before you can use it.
11. **Security code:** a three-digit code that you have to enter for online purchases, as an added level of security. American Express cards have a four-digit code on the front.
12. **Networklogos:** can help you figure out which ATMs you can use for free.





## ATMs (Automated Teller Machines)

Debit cards can also be used at ATMs to get cash immediately and directly from your checking or savings account, 24 hours a day, seven days a week. Worldwide, there are more than 3 million ATMs available.

- When using a debit card at an ATM machine, you will usually be asked to enter your **PIN** (Personal Identification Number), to verify your identity.
- If you use an ATM owned by your bank, you will be able to complete a variety of transactions, such as depositing checks, transferring money from one account to another, and taking out cash.
- If you use an ATM owned by another bank, you may have more limited access to your account and be able only to withdraw money and check your balances. In addition, you will likely be charged a service fee of around \$1-\$3 by the bank who owns the machine. Your bank may also charge a fee of \$2 or more. These fees are deducted from your account immediately, so remember to record the fees along with your withdrawal amount!



## Prepaid Debit Cards

Prepaid debit cards are a useful option for people who don't have a checking account. Instead of depositing money with a bank, you "load" money onto the debit card (similar to loading money onto a gift card), then spend the money that you loaded. Most prepaid debit cards can be used the same way as a traditional debit card, such as to make purchases and get cash out of an ATM.

Key differences between prepaid debit cards and bank account-based debit cards include:

### Pros:

- You don't need to start with a specified minimum balance.
- You can't spend more money than you have.
- They minimize risk of identify theft and offer more privacy.
- There are no credit checks.
- Some have unique features to help with budgeting.

### Cons:

- Your money may not be insured by the FDIC.
- There is no overdraft protection.
- Most don't pay interest or allow you to link to an interest-bearing savings account.
- You can't set up recurring online bill payments.
- You don't build a credit history.



## Online Bill Pay

Many people use **online and mobile banking** to pay their bills, including monthly credit cards and even one-time doctor's bills. To set up an online bill payment:

- Log into your bank's website or mobile banking app and enter the person or company you wish to pay as a "Payee."
- Provide information about the payee, including their address and the reference or account number they assigned you.
- Enter a payment amount.
- Decide whether it will be a one-time payment or recurring. For **recurring payments**, you will also choose when the payment will be sent each month.

It is important to remember that sometimes when you set up an online bill payment, your bank will print and send a check through the mail, which means it could take up to a

week for the company or person to receive your payment. Consider this when scheduling online payments to make sure you don't miss the due date for a bill.

In most cases, however, your payment will go through as an **Electronic Funds Transfer (EFT)**. The bank "wires" the money directly into the account of whomever you are paying. EFTs can also be used for:

- Automatic transfer of your paycheck from your employer's account to your checking account, also known as direct deposit. To set this up, you will provide your employer with the checking account and routing numbers that appear on your paper checks.
- Automatic payment of an ongoing bill such as a music service membership fee or phone bill. Such payments can be set up through the website of the company you are paying, by providing them with your debit card number, or through your bank.

The screenshot shows a web interface for online bill payments. A sidebar on the left contains navigation options: Home, Messages, Transactions, Funds Transfer, Bill Payment (highlighted), Activity Center, Statements, Mobile Deposit, Branches, Services, Help, Settings, and Log Off. The main content area has two tabs: 'Pay Bills' and 'Payment Activity'. Below the tabs is a search bar labeled 'Search payees' and a '+ Add payee' button. A table lists payees with columns for 'Payee', 'Pay from', 'Amount', and 'Date'. Five green arrows point to specific elements: 1 points to the search bar, 2 points to the 'Payment Activity' tab, 3 points to the 'Pay from' column, 4 points to the 'Amount' column, and 5 points to the 'Date' column. The table contains the following data:

Payee	Pay from	Amount	Date
MASTERCARD	Checking: XXXXXX8888	\$0.00	Select Date
COMCAST BEAVERTON S...	Checking: XXXXXX8888	\$0.00	Select Date
MYGREATLAKES - Large	Checking: XXXXXX8888	\$0.00	Select Date
MyGreatLakes - Small	Checking: XXXXXX8888	\$0.00	Select Date
Neil Worford	Checking: XXXXXX8888	\$0.00	Select Date
Waterford Creek HOA	Checking: XXXXXX8888	\$0.00	Select Date

At the bottom of the table, it says 'Total for 0 payments: \$0.00' and there is a 'Review Payments' button.

1. **Payees:** list of all accounts and people you pay through your online banking account.
2. **Payment Activity:** use this tab to check on upcoming payments and confirm that scheduled payments were sent.
3. **Pay From:** your bank accounts that hold the money you will use to pay your bills.
4. **Payment Amount:** the amount of money you want to send in a single payment.
5. **Transaction Date:** you can have a bill paid immediately or set it up for future payment.



## Person to Person (P2P) Bill Pay

Most banks also allow you to send money to individuals without knowing the recipient's bank account information. Instead, you enter a phone number or email address, and the bank transfers the money to the account linked to that identifier. **P2P payments** go by a variety of names. Be sure to research any fees, and find out if your recipient needs to have an account with the payment service used by your bank. In many cases, the recipient can just provide their bank account information to claim a payment.

## Digital Payment Services

In addition to the P2P services provided by banks, there are a number of **digital payment services** that allow you to send money to individuals or make purchases through online shops and websites. The P2P service is essentially a middleman: you link your bank account or a credit card, and it gives you a simple way of making transactions. In most cases, both the sender and receiver need to have a linked bank account or debit card, and an account with the service provider. Popular digital payment apps include PayPal, Venmo, Square Cash, Google Wallet, and Facebook Messenger.

For some of these services, you can choose to link either a debit or a credit card. Keep in mind that many P2P services charge fees for paying with a credit card, but not for paying with a checking or savings account. On top of that, some credit card issuers consider P2P transfers cash advances, which carry higher interest rates on top of transfer fees.

## NFC (Near-Field Communication) Payment

Many merchants now offer cardless **NFC (Near-Field Communication)** payment systems that work with the digital "wallet" on a smartphone. The major smartphone manufacturers, such as Apple and Samsung, each have their own NFC system that transmits stored credit and debit card information when you bring the phone close to the retailer's payment terminal, allowing you to complete a transaction without ever having to take out your real wallet. Many large retailers and P2P payment services offer their own digital wallet apps as well.





# Activity 1

## MANY WAYS TO PAY



**PART 1:** Consumers today have many different options when choosing a bank account and method of paying. Answer these T/F questions to test your knowledge of how each choice might fit different situations.

- Digital payment services require a bank account or debit card to make transactions.
   
 True       False
- Interest-bearing checking accounts are a good option for people who keep very little money in their checking account.
   
 True       False
- Prepaid debit cards offer more privacy than traditional bank-issued debit cards.
   
 True       False
- EFTs are a convenient way of paying a recurring monthly bill, such as your Spotify membership.
   
 True       False
- If you have overdraft protection, it's like having extra money in your bank account to use without penalty.
   
 True       False

**PART 2:** Choose the best option for each scenario:



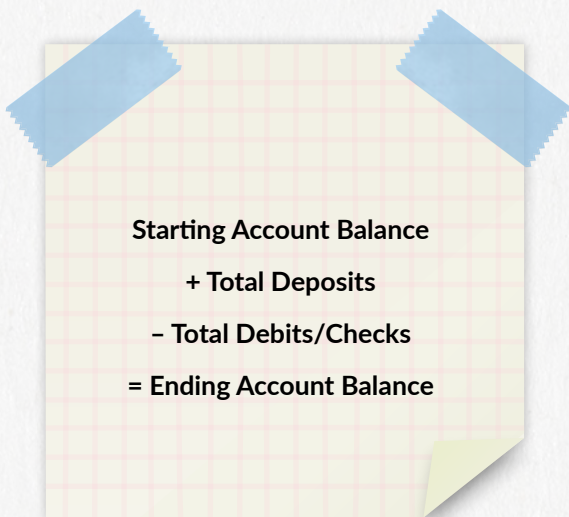
- When you go jogging, you like to stop for coffee on your way home, but carrying a wallet is inconvenient.
   
 A. Smartphone Wallet App       B. Checkbook       C. Online Banking App
- You are going on vacation with a friend's family, and your parents would like to give you spending money. They want something fast, low-risk, and with no long-term commitment.
   
 A. Cash       B. Smartphone Wallet       C. Prepaid Debit Card
- You want to open a checking account and have \$1,000 to start with. Each month, you will have your paychecks, totaling \$600 or more, directly deposited into your account. You also plan on setting up automatic payments for your phone bill and cloud storage totaling \$75 per month. Choose the best checking account from the chart below.
   
 A. Basic Checking       B. Interest Checking       C. Prepaid Debit
- You are opening your first checking account and have \$25 to start with. Each month, you will have your paychecks, totaling \$250, directly deposited into your account. You don't have any online bills, and pay cash for most things. There are very few banks nearby, so you expect to go frequently to ATM machines that are not owned by your bank. Choose the best checking account from the chart below.
   
 A. Basic Checking       B. Interest Checking       C. Prepaid Debit
- You are opening your first checking account and have \$50 to start with. Each month, you will deposit the cash you earn from babysitting, either at the ATM or the bank. You will set up online bill payment for your phone bill and gym membership. Choose the best checking account from the chart below.
   
 A. Basic Checking       B. Interest Checking       C. Prepaid Debit

Bank (Type)	Interest	Monthly Fees	Minimum Balance	Fee for using other bank ATMs	Other Features
Basic Checking	0	\$5	None	\$2.50	<ul style="list-style-type: none"> <li>monthly fee waived for setting up automatic bill payments</li> </ul>
Interest Checking	1%	\$10	\$500	\$2.50	<ul style="list-style-type: none"> <li>monthly fee waived if you have direct deposits of \$500 or more</li> <li>offers overdraft protection up to \$75</li> </ul>
Prepaid Debit	0	0	None	\$0	<ul style="list-style-type: none"> <li>one-time set-up charge of \$15</li> </ul>



## Maintaining a Bank Balance

When you open a checking account, it is critical that you keep track of how much money you have spent, and how much money is left in the account. You can track the balance with a **check register**, which is basically a spreadsheet similar to the one used for your savings account. Instead of recording interest, you will be keeping track of each type of transaction (check, ATM, etc.) and the debit or credit amount. At the end of each week or month, you can balance or **reconcile** your register using the following formula:


$$\begin{aligned} &\text{Starting Account Balance} \\ &+ \text{Total Deposits} \\ &- \text{Total Debits/Checks} \\ &= \text{Ending Account Balance} \end{aligned}$$

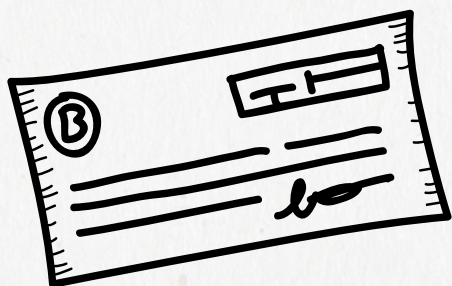
Some bank checking accounts do not require a high minimum balance, but you must always have enough money in your account to cover your payments and purchases. Spending more than you have available can result in a transaction being denied or your account becoming **overdrawn**. This can be embarrassing if you are at a restaurant and find you're unable to pay for the food you've just eaten. It can also result in paying late fees to the merchant and an **overdraft penalty** to the bank. While every bank is different, banks commonly charge

\$25 or more per check for overdraft charges. In addition, merchants often charge \$15 or more for each check that is returned unpaid.

Many banks offer **overdraft protection**. Types of overdraft protection vary but can include:

- Automatic transfer of money from another account at the same bank (assuming you have one) to cover the amount you are deficient in your checking account to prevent you from overdrawing.
- Allowing you to overdraft your account up to a specified limit before assessing any penalties or bouncing your checks.
- Lending you the amount of money by which you have overdrawn your account and charging you a high rate of interest on this loan. (You must pay interest until you repay the loan by depositing enough money into the checking account to correct the deficiency).

In all of these cases, the bank may charge you a fee for these services.





# Activity 2

## PART 1: KEEPING TRACK



Fill in the missing information on this spreadsheet based on the scenario described below.

TRANS. TYPE/ CHECK NUMBER	DATE	DESCRIPTION	CHECK/DEBIT AMOUNT	DEPOSIT/ CREDIT AMOUNT	BALANCE
<b>BEGINNING BALANCE</b>					\$
EFT—direct deposit	1-Sep	Paycheck		\$105.24	\$
Debit	3-Sep	Gas	\$25.00		\$
ATM	4-Sep	Cash Withdrawal	\$40.00		\$
Debit	5-Sep	Coffee	\$4.89		\$
ATM	10-Sep	Cash Withdrawal	\$40.00		\$
Mobile Pay	12-Sep	Clothing Store	\$35.00		\$
EFT—direct deposit	15-Sep	Paycheck		\$108.78	\$
Debit	16-Sep	Concert tickets	\$41.56		\$
Auto Pay—EFT	16-Sep	Music Club Monthly Fee	\$9.99		\$
Debit	25-Sep	Dinner Out	\$68.00		\$
ATM	25-Sep	Cash Withdrawal	\$25.00		\$

- Imagine you have a part-time job and receive a paycheck twice per month. You must use that money to pay for school lunches, your monthly cell phone bill, and day-to-day entertainment. At the start of September, your checking account balance was \$143.68. During the month, your paychecks total \$105.24 and \$108.78. You also have 9 transactions totaling \$289.44. Fill in the spreadsheet with the missing information.
- Every month, the bank will send you a **statement** that shows the beginning and ending balance for the account, and a list of all the credits and debits for the account during that time period. You should compare the statement to your **check register** and **reconcile** the two records to verify that all the information is correct and that your account has sufficient funds to cover upcoming expenses. Reconcile the following statement with what you've recorded above. Record any differences in the column on the right.

TRANS. TYPE/ CHECK NUMBER	DATE	DESCRIPTION	CHECK/DEBIT AMOUNT	DEPOSIT/CREDIT AMOUNT	BALANCE
<b>BEGINNING BALANCE</b>					\$143.68
EFT—direct deposit	1-Sep	Paycheck		\$105.24	\$248.92
Debit	3-Sep	Gas	\$25.00		\$223.92
ATM	4-Sep	Cash Withdrawal	\$40.00		\$183.92
Debit	5-Sep	Coffee	\$4.89		\$179.03
ATM	10-Sep	Cash Withdrawal	\$40.00		\$139.03
Mobile Pay	12-Sep	Clothing Store	\$35.00		\$104.03
Mobile Pay	12-Sep	Clothing Store	\$35.00		\$69.03
EFT—direct deposit	15-Sep	Paycheck		\$108.78	\$177.81
Debit	16-Sep	Concert tickets	\$41.56		\$136.25
Auto Pay -EFT	16-Sep	Music Club Monthly Fee	\$9.99		\$126.26
Debit	25-Sep	Dinner Out	\$68.00		\$58.26
ATM	25-Sep	Cash Withdrawal	\$25.00		\$33.26





## Activity 2

### PART 2: OVERDRAWN!



**NOTE:** You can check your current account balance and recent transactions on your bank's website and/or mobile app. It may be tempting to rely on this information to tell you how much money is in your account. Keep in mind that some transactions may not show up for several days!

1. You used your phone's mobile wallet on a weekend trip to the mall and forgot to record it. You didn't realize this until you decided to check your account balance online one evening. According to the bank records, you went to the movies and spent \$22.94 on admission and snacks. Now you have \$48.12 in your account. But in two days, you have an EFT payment scheduled to send \$62 to the cell phone company to pay your monthly bill.

- What do you think will happen when the bank processes your EFT payment?

\_\_\_\_\_

- What are some possible consequences of your failure to record the debit? Try to list three possibilities.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Same situation. Your bank will allow you to overdraft up to \$75, but it charges \$30 for every overdraft transaction, and these overdraft fees count toward the \$75 limit. Once your account is overdrawn by \$75, the bank will return checks unpaid (and charge \$15 instead of \$30) or reject debit transactions.

- You need to put gas in your car to get to school, so you charge \$23 to your debit card. What is your balance now? \$ \_\_\_\_\_
- The next day, the bank sends your scheduled payment to the cell phone company. What is your balance after that payment goes through? \$ \_\_\_\_\_
- Finally, your school's PTA attempts to deposit a \$10 check that you wrote at last month's bake sale and forgot to put in your register. What will happen?

\_\_\_\_\_

- What is your account balance now? \$ \_\_\_\_\_
- How much have you paid in overdraft fees? \$ \_\_\_\_\_



Visit [ymiclassroom.com/byf/byf\\_book1\\_register\\_template.xlsx](http://ymiclassroom.com/byf/byf_book1_register_template.xlsx) to download a register template that you can use to track your own spending. If you don't have access to a spreadsheet app, like Excel or Google, simply copy the headers into a notebook and record your transactions by hand.





## Protecting Yourself From Identity Theft

According to the Federal Trade Commission, as many as nine million Americans have their identities stolen each year.<sup>6</sup> If someone finds a way to steal your private information, such as your Social Security number or credit card information, they may be able to make purchases, get a phone, rent an apartment, or order and use new credit cards — and it may be months before you find out. While some **identity theft** victims have been able to quickly resolve problems, for others it may take months to repair the damage done to their good name and to their credit rating.

Thieves can get your information in a number of ways, such as going through your trash to find old statements, posting online scams, using computer viruses, or simply stealing your wallet or purse. Some thieves use special software that records your debit and credit card information when you complete transactions at the checkout. You should guard your personal and financial information carefully, taking common-sense steps such as:

- Monitor your financial accounts closely, checking monthly statements and balances, and regularly checking your credit report.
- When paying online, make sure the company you're buying from has a secure payment system.
- Shred old documents rather than throwing them away.
- Maintain computer security with firewalls and virus protection software.
- Don't provide your personal information to people you don't know, or to companies (particularly online) if they don't seem legitimate.
- Choose PIN numbers that you can easily remember, but which are private to you. PINs like 1234 are too easy for thieves to guess.
- Likewise, make your passwords for bank websites and mobile apps unique and private. Be sure to change them frequently and keep them confidential.
- If using mobile banking, be sure to keep a secure password that locks your phone.
- When using public computers to log into your bank account, make sure you manually end your banking session before leaving the computer.

<sup>6</sup> <http://guides.wsj.com/personal-finance/credit/how-to-protect-yourself-from-identity-theft/>



If you think that someone has stolen your personal information, take action immediately. If you see unauthorized charges on one of your credit cards or bank statements, contact your credit card provider or bank immediately to dispute such charges and alert them to the problem. Also contact one of the three credit reporting agencies listed below to place a fraud alert on your credit report. This will prevent an identity thief from opening any new accounts in your name. (Note: if you notify one agency, they're required to inform the other two.) You may also want to file an Identity Theft Report with the police, which will give you certain legal rights, such as helping to prevent credit reporting agencies from listing fraudulent accounts on your report, and ensuring that collection agencies do not pursue you for charges you did not make.

### Equifax

[www.equifax.com](http://www.equifax.com)

Place Fraud Alert: 888-836-6351

Dispute Credit Report Items: 866-349-5186

### Experian

[www.experian.com](http://www.experian.com)

Place Fraud Alert: 888-397-3742

Dispute Credit Report Items:  
[www.experian.com/disputes/main.html](http://www.experian.com/disputes/main.html):

### TransUnion

[www.transunion.com](http://www.transunion.com)

Place Fraud Alert: 800-680-7289

Dispute Credit Report Items: 800-916-8800



# CHAPTER 4: Credit Cards



## Did You Know?

*Credit card debt averages nearly \$7,000 per month for families that carry over debt from month to month. Across the U.S., this debt totals more than \$420 billion.<sup>7</sup>*

**Credit** can be a wonderful thing. It allows us to purchase homes, cars, and other items we need for daily life quickly and easily. But it can also spiral out of control very quickly for those who use it as a method for living beyond their means. Credit card users must remember that a purchase made on credit is essentially a loan made to you by the card issuer. And every penny you charge has to be repaid, with interest. The more money you charge, the more interest you pay!

Many consumers are bombarded with credit card advertisements from the day they turn 18. Understanding the risks and benefits of credit cards, and using that knowledge to make informed spending decisions, is the key to maintaining good financial health.

## Credit Card Basics

**Credit cards** are easy to use. When making a purchase in person, you simply scan the card in an electronic card reader or hand the card to the clerk. You may be asked to sign a paper receipt or the screen of the card reader to finalize the transaction. More and more, though, credit card companies are working to phase out signatures and replace them with other forms of identification, such as fingerprint matching or recognition of facial features.

Online purchases are just as simple; you type in your card number and expiration date along with some additional information that proves you are the cardholder. This typically includes your billing address and the security code, or CSC (Card Security Code, sometimes called the CVC, Card Verification Code), which is a three- or four-digit number on the back of your card. Many websites, shopping apps, and mobile wallets will allow you to store credit card information, making the process even more convenient by allowing you to make purchases without even taking the card out of your wallet.

<sup>7</sup> [www.nerdwallet.com/blog/average-credit-card-debt-household/](http://www.nerdwallet.com/blog/average-credit-card-debt-household/)

## Interest and Fees

Remember the lesson on compound interest, and how it could help your money grow in a savings account? With credit cards, that same principle is working against you. Instead of earning interest on money you deposit, with credit cards you *pay* compound interest on the charges you make, which is actually money you “borrow” from the credit card company.

- Interest is typically compounded daily, based on an **annual percentage rate**. When you are granted a credit card account, the card issuer is required to clearly explain the **interest rate** associated with the credit card so that you are aware of how much the loan will cost you over time.
- Some credit card issuers charge an **annual fee** that must be paid for the privilege of using a credit card. These fees can range from as little as \$25 up to \$100 or more, depending on the account.
- Credit card issuers may charge a **late fee** when the minimum payment on a credit card is not paid by the due date. These fees are typically \$25 or more, and are automatically added to the account balance, which adds to the interest you end up paying.
- Finally, most credit cards offer cardholders the option of using the card to obtain cash. The amount of cash is limited, and it is generally only a small percentage of the total credit available on the account. **Cash advances** generally have a higher rate of interest than purchases made from merchants.





## Cardholder Responsibilities

Because a credit card is a loan made to you by a financial institution, you should expect that there are certain responsibilities attached to the privilege of having a credit card.

- Most credit cards have a **credit limit**, which is the maximum balance you can borrow, or **charge** at any time. This limit is based on previous credit history, income, and expected ability to repay the loan; it helps to ensure that you don't spend more money than you can repay. If you try to charge more than the limit, the charge will be denied when the merchant swipes the card for payment and you will have to present an alternate form of payment.
- On each monthly statement, you will see a **minimum payment** that you must make to keep the account current. Making the minimum payment (usually between 1.5% and 3% of the **outstanding balance**) shows the bank that you intend to repay the loan fully and you have the discipline to repay the loan in full. However, making only the minimum payment each month can cost you a lot of money in interest over time.
- Credit card payments must be made by the **payment due date** shown on the statement. If the credit card company does not receive at least the minimum payment by the due date, then they may:
  - Suspend your card so you can no longer use it.
  - Charge you a late fee of \$15 or more.
  - Increase your interest rate.
  - Report you as delinquent to credit rating agencies. If you establish a pattern that indicates you may not repay your debts, it can become difficult for you to get new cards or other types of credit (including loans). You'll learn more about credit reports and ratings in Book 3.

## Choosing a Credit Card

As with any loan, it is important to do your homework before selecting a credit card. Reading the fine print on credit card offers and applications is a must when choosing a card.

To get you to apply for their card, many banks make special offers that may or may not expire after a



certain period of time. Many banks offer credit cards with no annual fees and special interest rates. The special interest rates may be very low, or even zero percent, but these rates are often temporary and apply for only a short period of time. Some credit cards offer points, frequent flyer miles, or other rewards for selecting a specific card. While these may seem beneficial, it is important to read carefully to see if there are hidden fees or requirements for card use in order to qualify for these types of incentives. Finally, many credit card companies encourage people to transfer debt from higher interest rate credit cards over to another account. All of these options must be considered as you select a card that will meet your purchasing needs.

## Consumer Protection

Credit cards are big business in the U.S. The ability to make purchases even when you may not have the money on hand can be very tempting for consumers, and provides banks with a steadily growing income stream. In 2009, the Credit Card Accountability, Responsibility and Disclosure, or Credit CARD, Act was passed, issuing a set of rules to prevent card issuers from hiding any fees or rates from their customers. It also places restrictions on how and when they can raise your interest rates, and how much they can charge in additional fees.



# Activity 1

## PART 1: READING YOUR STATEMENT



Each month the bank that issued the credit card will send you a credit card statement. This may be mailed to you or can arrive as an email statement, based upon your personal preferences. The statement will include all of the key pieces of information about the status of your account. Use this sample to learn more about the information provided on a credit card statement. Fill in the letters to identify each part of the sample statement defined below.

<b>ACCOUNT NUMBER</b> 1234 2345 3456 4567		<b>STATEMENT CLOSING DATE</b> 6/30/19	<b>PAYMENT DUE DATE</b> ← C 7/23/19		
<b>CREDIT LIMIT</b> \$2,000		<b>AVAILABLE CREDIT</b> \$1555.40	<b>PREVIOUS BALANCE</b> \$390		
L → <b>CASH ADVANCE LIMIT</b> \$500	<b>MINIMUM PAYMENT DUE</b> \$6.60	<b>NEW BALANCE</b> ← A \$444.60			
<b>STATEMENT SUMMARY</b>		<b>FINANCE CHARGE SUMMARY</b>			
K → -PAYMENTS	\$180	<b>ANNUAL PERCENTAGE RATE</b>	G ↓		
+PURCHASES & OTHER CHARGES	\$230	<b>Purchases</b>	12.00%		
J → +CASH ADVANCES	\$0	<b>Cash Advances</b>	20.00%		
H → +FINANCE CHARGES	\$4.60	<b>DAILY FINANCE CHARGE RATE</b>			
I → +LATE FEE	\$0	<b>Purchases</b>	.03287%		
A → =OUTSTANDING BALANCE	\$444.60	<b>Cash Advances</b>	.05479%		
<b>F → THIS MONTH'S ACTIVITY</b>		D ↑			
<b>TRANS. DATE</b>	<b>TRANS. POST</b>	<b>REFERENCE #</b>	<b>DESCRIPTION</b>	<b>CREDITS</b>	<b>CHARGES</b>
2-Jun	5-Jun	987654321A	Game Store		\$25.00
9-Jun	9-Jun	123456789B	Video Store		\$45.00
16-Jun	16-Jun	987654321C	Restaurant		\$105.00
24-Jun	24-Jun	123456789D	Gym membership		\$40.00
23-Jun	24-Jun	098765432E	Payment	\$180.00	
25-Jun	28-Jun	121212121F	Annual Fee		\$15.00

- **Annual fee:** the amount of money the credit card issuer charges you each year for having the credit card account.
- **Annual percentage rate:** yearly interest rate you pay on the outstanding balance.
- **Cash advance limit:** the total amount of money you are allowed to take from the account in the form of cash and have outstanding at any point in time.
- **Cash advances:** money you obtain in the form of cash through the use of an ATM or bank.
- **Daily finance charge rate:** interest rate you pay each day on the outstanding balance.
- **Finance charges:** interest payment charged to you for the statement period.
- **Late fee:** a penalty you are charged for not making your minimum payment by the established payment due date.
- **Minimum payment due:** based on a percentage of the total balance, this is the least amount you can pay to keep your account in good standing.
- **Outstanding balance:** total amount of money you owe; it helps determine the finance charge you will pay.
- **Payment due date:** date by which the credit card company must receive your payment.
- **Payments:** the amount you paid on the last credit card statement you received and any other payments you may have made since the last statement.
- **This month's activity:** a brief history showing purchases made with the credit card since the last statement.

**LATE PAYMENT WARNING:** If we do not receive your minimum payment by the date listed above, you may have to pay a late fee of up to \$37 and your APRs may be increased up to the variable Penalty APR of 29.99%.  
**MINIMUM PAYMENT WARNING:** If you make only the minimum payment each period, you will pay more in interest and it will take you longer to pay off your balance. For example:

If you make no additional charges using this card and each month you pay...	You will pay off the balance shown on the statement in about...	And you will end up paying an estimated total of...
Only the minimum payment \$14.00	9 years, 5 months 3 year(s)	\$742.00 \$531.00



# Activity 1

## PART 2: FIGURING FINANCE CHARGES



The **finance charge** is an interest payment that is compounded daily, based on your **average daily balance (ADB)**. This is calculated by adding together the ending balance for each day in the billing period (even the days that your balance didn't change), and then dividing by the total number of days.

$$\text{Average Daily Balance} = \text{Sum of the Ending Daily Balances} \div \text{Number of Days in the Billing Period (assume 30 days)}$$

Use the data in the sample statement in Part 1 to calculate the average daily balance for June.

Sum of ending daily balances: \$ \_\_\_\_\_  $\div$  30 = \$ \_\_\_\_\_ Average Daily Balance

Once you know the average daily balance, you can calculate the finance charge.

1. Find the annual percentage rate: \_\_\_\_\_ %
2. Divide by 365 to get a daily percentage rate: \_\_\_\_\_ %
3. Finance Charge = Daily Percentage Rate x Days in Billing Period x Average Daily Balance

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

Date	Daily Balance
1-Jun	\$390.00
2-Jun	\$
3-Jun	\$
4-Jun	\$
5-Jun	\$
6-Jun	\$
7-Jun	\$
8-Jun	\$
9-Jun	\$
10-Jun	\$
11-Jun	\$
12-Jun	\$
13-Jun	\$
14-Jun	\$
15-Jun	\$
16-Jun	\$
17-Jun	\$
18-Jun	\$
19-Jun	\$
20-Jun	\$
21-Jun	\$
22-Jun	\$
23-Jun	\$
24-Jun	\$
25-Jun	\$
26-Jun	\$
27-Jun	\$
28-Jun	\$
29-Jun	\$
30-Jun	\$
<b>Total</b>	\$
	$\div$ 30
<b>ADB</b>	\$



### Minimums Matter

The minimum payment is an important detail because the amount you pay each month determines how long it will take to pay off your credit card debt. The minimum payment amount is typically calculated as a percentage of the outstanding balance. Use the data in our sample statement to calculate the minimum payment percentage for this account.

$$(\text{Minimum Payment} \div \text{Outstanding Balance}) \times 100 = \underline{\hspace{2cm}} \% \text{ Minimum Payment Percentage}$$

You can use an online credit card payoff calculator to determine how long it will take you to pay off a card based on how much you pay each month (see [www.creditcards.com/calculators/minimum-payment](http://www.creditcards.com/calculators/minimum-payment)).

It is important to remember that the longer it takes you to pay off your debt, the more you will pay in finance charges and fees.



# Activity 1

## PART 3: EXTRA PRACTICE

Use this data to answer the questions below.

### CREDIT CARD A:

- Annual percentage rate = 22.99%
- 30-day billing period
- \$22,640 total daily account balance
- \$700 statement balance
- Minimum payment – 2% or \$15, whichever is greater



### CREDIT CARD B:

- Annual percentage rate = 18.5%
- 31-day billing period
- \$9,200 total daily account balance
- \$275 statement balance
- Minimum payment – 2% or \$10, whichever is greater

1. Calculate the **daily finance charge rate**.

Card A: \_\_\_\_\_ %

Card B: \_\_\_\_\_ %

2. Calculate the average daily balance for each account.

Card A: \$ \_\_\_\_\_

Card B: \$ \_\_\_\_\_

3. Calculate the minimum payment on each account.

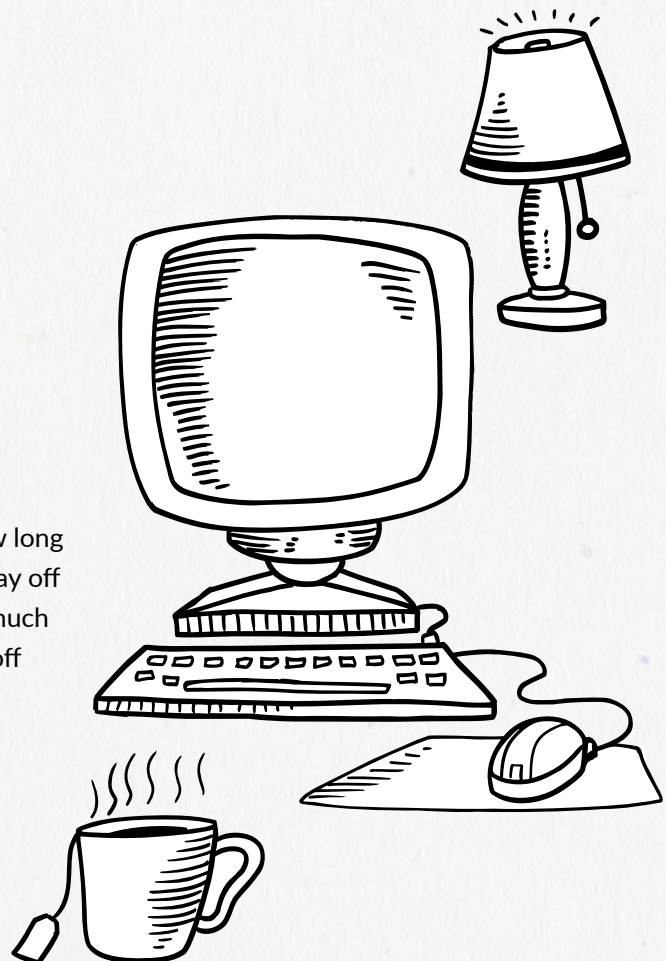
Card A: \$ \_\_\_\_\_

Card B: \$ \_\_\_\_\_

4. For each account, use the online payoff calculator at [www.creditcards.com/calculators/payoff](http://www.creditcards.com/calculators/payoff) to determine how long it will take to pay off the balance. How long will it take to pay off the balances if you only pay the minimum payment? How much money would you have to pay each month in order to pay off the total debt in 6 months?

Card A: Minimum payment payoff in \_\_\_\_\_ months  
6 month payoff at \$ \_\_\_\_\_ per month

Card B: Minimum payment payoff in \_\_\_\_\_ months  
6 month payoff at \$ \_\_\_\_\_ per month





# Take-Home Lesson

## PUTTING IT ALL TOGETHER



You have just purchased a new gaming system and some new games using your credit card. You paid \$325 for the system and the games. Your credit card has an annual percentage rate of 22%, and the minimum payment is 3.5% of the outstanding balance or \$10, whichever is greater.

Assuming that all months have 30 days, analyze how long it will take you to pay off the balance, making monthly payments of various amounts, and the total cost of the purchase, including all finance charges. You can use the appropriate calculators at [www.creditcards.com/calculators](http://www.creditcards.com/calculators) or download a spreadsheet at [www.ymiclassroom.com/byf/byf\\_book1\\_credit\\_card\\_calculations.xlsx](http://www.ymiclassroom.com/byf/byf_book1_credit_card_calculations.xlsx). Note that in order for all months to have 30 days, assume that the year has 360 days.

1. For the first month, what will be the finance charge: \$ \_\_\_\_\_; the minimum payment: \$ \_\_\_\_\_
2. How long will it take you to pay off the credit card balance if you make only minimum monthly payments?  
\_\_\_\_\_
3. If you make only minimum monthly payments, what will the total cost of the purchase be once you have paid it off? \$ \_\_\_\_\_
4. How much of this amount will you have paid in interest?  
\$ \_\_\_\_\_

Update your spreadsheet or use the [online calculators](#) to see what would happen to the overall cost of the items if you made a payment of \$50 per month.

5. If you make a payment of \$50 per month, what happens to the overall cost of the item? \_\_\_\_\_
6. How long will it take you to pay it off? \_\_\_\_\_
7. How much will you pay in interest using this scenario? \$ \_\_\_\_\_
8. Based on what you have learned, is it wise to purchase the gaming system and games using a credit card? Explain your answer. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. If you had the opportunity to purchase something you really wanted using a credit card vs. waiting until you saved the money needed to make the purchase, which option would you choose? Explain your answer.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





# BOOK 1 Final Assessment Quiz

You earn \$150/month and have the following expenses:

- \$15/week – eating out
- \$40/month – gym
- \$60/month – phone bill

1. Assuming there are 4 weeks in a month, how do your expenses compare to your income?  
 A. Expenses are higher.  
 B. Income is higher.  
 C. They are the same.
2. You'd like to put \$25/month into savings. Which of the following is a "want" that you could cut back on?  
 A. Gym membership  
 B. Eating out  
 C. Both are wants.
3. The best tool for budgeting is:  
 A. Financial management app  
 B. Pencil and paper  
 C. Spreadsheet software  
 D. Any system that you'll use

You are opening a savings account with \$100 and have two options: Option 1 pays 4.8% annual interest, compounded monthly. Option 2 pays 5% annual interest, compounded annually. Use this data to answer these questions.

4. If you don't plan on adding to the initial deposit, which account is the better choice?  
 A. Option 1  
 B. Option 2  
 C. Both are the same.
5. If you plan to deposit \$50/month, which account is the better choice?  
 A. Option 1  
 B. Option 2  
 C. Both are the same.
6. Which of these compounding methods will grow your savings balance the quickest?  
 A. Daily compounding  
 B. Monthly compounding  
 C. Quarterly compounding

You open a checking account with \$50 and set up your \$200 paychecks to be directly deposited on the 1st and 15th of each month. You also set up recurring monthly payments to a music service for \$9.99 and cloud storage for \$1.99. For most purchases, you use your debit card or cardless payment system on your smartphone; you go to the ATM for cash about once per week, and you're not very good at managing your budget, so you overdraw a few times a year.

7. Which would you choose?  
 Bank A - pays 2% interest with minimum balance of \$500; charges \$10/month fee if balance is below \$500; charges \$34 each time you overdraw  
 Bank B - no interest; \$10 monthly fee waived for at least 2 EFTs per month; no overdraft fee, but checks are returned unpaid if you don't have enough funds  
 Bank C - 1% interest, \$5 monthly fee waived for direct deposit; overdraft fee is \$10 and they won't charge for subsequent overdrafts that occur on the same day
8. What are the major differences between internet-based checking accounts and brick-and-mortar banks?  
 A. internet banks tend to charge lower fees.  
 B. Internet banks don't usually have their own ATMs.  
 C. They are very similar.  
 D. All of the above.

You want to open a new credit card: Option A charges 18% interest. Option B charges 0% interest for the first 6 months, and 22% interest for every month after that. You can afford to pay \$50 a month toward your credit card debt. Use the online payoff calculator at [www.creditcards.com/calculators/payoff](http://www.creditcards.com/calculators/payoff) to answer the questions.

If you spend \$500 on a new phone, which will take longer to pay off?

- A. Option A
- B. Option B
- C. It will take the same amount of time.

In which case will you pay less interest?

- A. Option A
- B. Option B
- C. Interest would be equal.





## Chapter 1

**Budget:** an itemized list of income and expenses for a given period of time; a plan for spending money

**Excise Tax:** a federal, state, or local tax placed on non-essential consumer goods

**Expenses:** outlay of money needed to pay for items, services, etc.

**Gross Pay:** regular pay, overtime, and other earnings paid to an employee before taxes or any other obligations are deducted

**Needs:** basic survival necessities

**Net Pay:** remaining pay you take home after taxes and other deductions are made

**Quality:** the standard of something as measured against other things of a similar kind

**Sales Tax:** tax imposed by many states, counties, and cities on purchases

**Total Cost:** amount spent on an item or activity that includes all associated expenditures

**Unit Cost:** the price you pay for an item divided by the quantity it contains, based on a standardized measurement

**Value:** the amount of use or benefit you get from an item

**Wants:** items a person desires that are not essential

## Chapter 2



**Account Balance:** total amount of money that is in the account at a given point in time

**Compounding of Interest:** when money is earned on the total amount in the account, including the initial deposit and interest that has already been credited to the account

**Deposit:** money put into an account

**Discount Factor:** the amount that \$1 at some point in the future is worth today

**Future Value:** how much a set amount of money will be worth in the future

**Interest:** money paid to you by the bank for being able to use your money

**Interest Rate:** percentage you are paid for your money

**Investing:** the process of setting money aside to increase wealth over time and accumulate funds for long-term financial goals such as retirement

**Present Value:** the value of money right now, today

**Rule of 72:** a formula designed to help people estimate how long it will take to double their money at a certain expected interest rate

**Saving:** the process of setting money aside until a future date instead of spending it today

**Withdrawal:** money taken out of an account

## Chapter 3



**Account Balance:** total amount of money that is in the account at a given point in time

**Automated Teller Machine (ATM):** a machine that allows you to perform basic banking functions without the help of a teller

**Check:** handwritten or computer-generated order specifying the amount of money to be paid and the name of the person or company who should receive the funds

**Checking Account:** an account at a bank against which payments can be made based on available funds that are deposited by or on behalf of the account holder

**Check Register:** a book or document in which to record the money take out or put into a checking account. Designed for recording checks, withdrawals, and deposits, it can be updated to fit other methods of banking and spending

**Debit Card:** a card that allows the user to withdraw money from a bank account to obtain cash or make a purchase

**Digital Payment Service:** an app or online tool that is provided by a company independent of the bank that holds your checking account

**Electronic Funds Transfer (EFT):** the movement of funds using computer systems, telephones, electronic terminals, or smartphones

**Identity Theft:** stealing someone's personal, identifying information and using it to make purchases or to get other benefits

**Minimum Balance:** the amount of money that must be kept in an account to avoid service charges, qualify for special service, or earn interest on a checking account



**Near-Field Communications (NFC):** technology that allows two devices to “speak” to each other when they come into close range. It is the basis for services that allow one to pay with a smartphone simply by waving a device over a receiver at the register.

**Online and Mobile Banking:** allows account holders to access their account information, view transaction history, and perform a range of banking transactions on the internet or with their mobile phone

**Overdraft Penalty:** a fee to cover the cost of processing a check drawn against insufficient funds

**Overdraft Protection:** arrangement with the bank to cover checks drawn against insufficient funds

**Overdrawn:** having a negative balance in a checking account

**Personal Identification Number (PIN):** code word/number connected to a bank account or debit card; verifies the owner's identity

**Person to Person Payments (P2P):** a type of electronic funds transfer that can be made via a mobile app or online; money is immediately sent from one person to another, often without sharing of bank account information

**Reconcile:** comparing the register balance for a checking account to the statement balance to identify any discrepancies in account activity

**Recurring Payment:** a transfer of money, usually to pay a bill, that is made on a regular basis. Once established, it is completely automated, with no additional input required from the account holder

**Statement:** a summary of financial transactions that have occurred over a given period on an account held with a financial institution

## Chapter 4



**Annual Fee:** the amount of money the credit card issuer charges for having the credit card account each year

**Annual Percentage Rate:** the yearly interest rate paid on the credit card balance

**Average Daily Balance:** the average amount owed on the credit card for each day of the billing cycle, calculated by adding up each day's ending balance and then dividing by the total number of days

**Cash Advance:** a short-term loan provided by a credit card issuer in the form of cash through the use of an ATM or bank

**Charge:** monies borrowed using a credit card

**Credit:** the ability to make purchases with the promise that the money will be repaid later

**Credit Card:** a card that allows the cardholder to repeatedly purchase products and services on credit. Most credit cards have credit limits and monthly minimum payments, but users are allowed to carry an outstanding balance from month to month.

**Credit Limit:** the maximum amount of money that the credit card issuer will allow you to charge

**Daily Finance Charge:** the interest rate you pay each day on the outstanding balance

**Finance Charge:** the interest payment owed on the credit card balance

**Interest Rate:** the percentage paid on the money one has charged

**Late Fee:** a penalty charged for not making the required minimum payment by the due date

**Minimum Payment:** the least amount one can pay on the card and still keep your account in good standing; typically, a percentage of the outstanding balance or some pre-set minimal amount if the balance is low

**Outstanding Balance:** the amount of money that has been charged and must be repaid

**Payment Due Date:** the date by which the credit card company expects to receive payment



