



## Lesson Ten

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# Saving and Investing



# simple interest calculation

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**Deposit x Interest Rate x Number of Years = Interest Earned**

**example**

You have \$100 in a savings account that pays 6% simple interest. During the first year, you would earn \$6 in interest.

$$\mathbf{\$100 \times 0.06 \times 1 = \$6.00}$$

$$\mathbf{\$100 + \$6 = \$106 \text{ (total value)}}$$

At the end of two years, you would have earned \$12 in interest.

$$\mathbf{\$100 \times 0.06 \times 2 = \$12.00}$$

$$\mathbf{\$100 + \$12 = \$112 \text{ (total value)}}$$

With simple interest, the account would continue to grow at the same amount of \$6 per year. At the end of ten years, you would have earned \$60.00 for a total value of \$160.00.



# compound interest calculation

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Interest is paid on the amount of deposit, plus any interest earned.

**Deposit + Earned Interest x Interest Rate = Interest Earned**

## example

You have \$100 in a savings account that pays 6% interest, compounded annually. During the first year, you would earn \$6.00 in interest.

$$\mathbf{\$100 + \$0 \times 0.06 = \$6.00}$$

$$\mathbf{\$100 + \$6 = \$106 \text{ (total value)}}$$

With compound interest, at the end of two years, you would have earned \$12.36 in interest.

$$\mathbf{\$100 + \$6 \times 0.06 = \$6.36}$$

$$\mathbf{\$106 + \$6.36 = \$112.36 \text{ (total value)}}$$

The account would continue to grow at an increased amount each year. At the end of ten years, you would have earned \$79.80 for a total value of \$179.80.



## pay yourself first

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### A little can add up!

Save this each week ... at % interest ... in 10 years you'll have

\$7.00	5%	\$4,720
14.00	5%	\$9,440
21.00	5%	\$14,160
28.00	5%	\$18,880
35.00	5%	\$23,600

You can buy ... two fast food meals  
or one movie ticket (and a candy bar)  
or save \$7.00 this week.

You can buy ... two small cheese pizzas  
or one large pepperoni pizza, delivered  
or one new CD  
or save \$14.00 this week.



### What can you give up to save for your financial goals?



# types of savings accounts

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## **Passbook account**

- Depositor receives a booklet to record deposits, withdrawals, and interest.
- Can access money easily from the bank.
- Passbook must be presented for every deposit or withdrawal.

## **Statement account**

- Depositor receives monthly statements instead of a passbook.
- Transactions can be made 24 hours a day at ATMs (automated teller machines).
- Interest rates are the same as passbook account.

## **Interest-earning checking account**

- Combines benefits of checking and savings.
- Depositor earns interest on any unused money in his/her account.
- Interest rates are usually lower than passbook or statement accounts.



# money market account

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- Checking/savings account.
- Interest rate varies with size of balance and in response to changes in national interest rates and economic conditions.
- Can access money from an ATM, a teller, or by writing up to three checks a month.

## Benefits

- Can access money anytime.
- Interest rate is higher than regular savings accounts.

## Trade-offs

- Usually requires a minimum balance of \$1,000 to \$2,500.
- A limited number of checks can be written each month.



# Certificate of Deposit (CD)

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**Bank pays a fixed amount of interest for a fixed amount of money during a fixed amount of time.**

## **Benefits**

- No risk.
- Simple.
- No fees.
- Offers higher interest rates than savings or money market accounts.

## **Trade-offs**

- May not have access to money during set period of time.
- Must pay a penalty to withdraw money early.



# choosing a savings account

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## Consider these factors:

### Interest Rate

### Fees, charges, and penalties

### Balance requirements

- minimum balance before earning interest.
- different interest rates for different size balances

### Balance calculation method

- calculated daily
- average of all daily balances

Ann wanted to buy a new computer. She and her friends shopped for new clothes and ate at the mall every week. By the time she paid her bills each month, she didn't have any money left.

Jerome took a different approach. When he received his paycheck, he paid himself first. He put 15% of his pay in a savings account. He paid his bills each month. One year later, he had enough money to buy a computer.





**How many years will it take to double my money?**

72 DIVIDED BY  
————— = YEARS TO DOUBLE  
INTEREST RATE A SUM OF MONEY

**At what interest rate will my money double in a set number of years?**

72 DIVIDED BY  
————— = INTEREST RATE REQUIRED  
YEARS TO  
DOUBLE  
A SUM OF MONEY



## Stocks

- Stock represents ownership of a corporation. Stockholders own a share of the company and receive a share of the profits.

## How they work

- Company profits are divided among shareholders in the form of dividends. Dividends are usually paid quarterly. Shareholders can make a profit if the price of the stock goes up. They can lose money if the price goes down.

Ellen's father suggests that she invest some of her earnings in stocks. She and her father research various companies and find an expanding athletic shoe company that is very well managed. Ellen has saved \$300.00. Her paycheck easily covers her regular expenses. She wants her \$300.00 to "make money." Ellen decides to buy shares of stock in the successful shoe company. One year later, her investment is worth \$525.00!

What would you do? Is it better to keep money in a savings account or to buy stocks? What factors should you consider before you make that decision?



## **Bonds**

- They are like “IOUs,” certifying that you loaned money to a government or corporation and outlining the terms of repayment.

## **How they work**

- The buyer purchases a bond at a discount. The bond has a fixed interest rate for a fixed period of time. When the time is up, the bond has “matured.” The buyer may redeem the bond for the full face value.

Every year since Mark was born, his grandfather bought him a US Savings Bond for his birthday. As he was growing up, Mark wished that his grandfather would buy him toys instead. His grandfather died when Mark was 12 years old. He had spent a total of \$600.00 for Mark’s bonds. When they mature, the bonds will be worth \$1,200.00!

What do you think? Would you rather receive a gift that you can use right now, or a gift that will benefit you in the future? Why?



## other investments

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### **Mutual funds:**

- Professionally managed portfolios made up of stocks, bonds, and other investments.

### **How they work:**

- Individuals buy shares. The fund uses money to purchase stocks, bonds, and other investments. Profits returned to shareholders monthly, quarterly, or semi-annually in the form of dividends.

### **Individual Retirement Accounts (IRAs):**

- Savings accounts for retirement or for educational purposes

### **How they work:**

- A portion of a person's income is deposited each year.

When Josh began his first full-time job at age 22, he wanted to plan for his future. He opened an IRA. Josh will contribute only \$2000.00 each year for the next nine years (\$18,000 total). At 9% interest, he can retire at age 65 and have \$579,471.00!