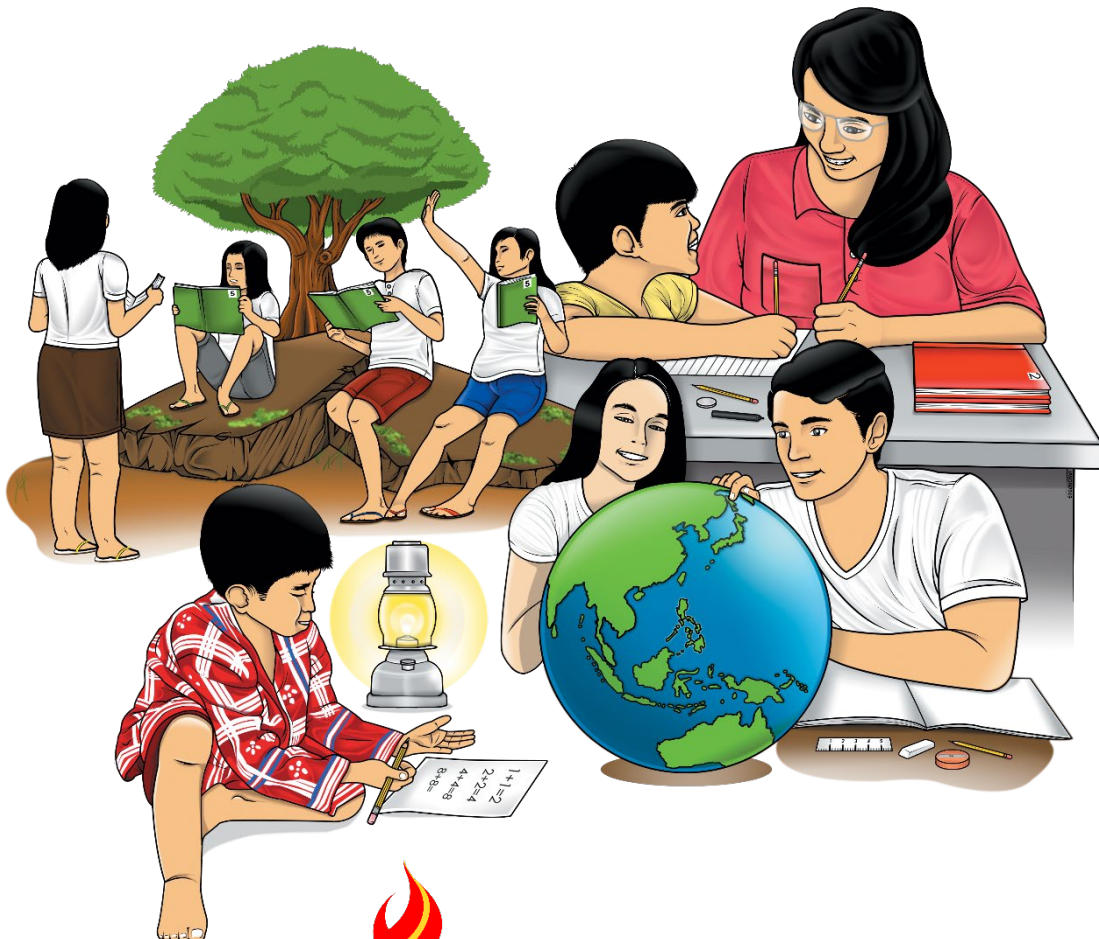


Senior High School

# General Mathematics

## Quarter 2 – Module 8:

### Stocks and Bonds



**General Mathematics – Senior High School**  
**Alternative Delivery Mode**  
**Quarter 2 – Module 8: Stocks and Bonds**  
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**Senior High School**

# **General Mathematics**

## **Quarter 2 – Module 8:**

### **Stocks and Bonds**

# Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



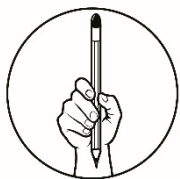
## ***What I Need to Know***

Have you ever heard of stocks and bonds? Have you ever experienced to borrow money from your parent or friend and had to pay it back with interest?

This module was designed and written for learners like you to describe how stocks and bonds work. This lesson will also prepare you to be financially independent and succeed in the near future.

In this topic, learners are expected to demonstrate an understanding of the basic concepts of stocks and bonds. Learners should also be able to use appropriate financial instruments involving stocks and bonds in formulating conclusions and making decisions. After going through this module, you are expected to:

1. illustrate stocks and bonds; and
2. distinguish between stocks and bonds.



## ***What I Know***

Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

1. It is the money that is earned in trade or business after paying the costs of producing and selling goods and services.
  - a. stock
  - b. profit
  - c. bond
  - d. investment
2. What is the other name for a bond's interest rate?
  - a. par value
  - b. face value
  - c. coupon rate
  - d. principal
3. A person or an entity that gives money or allocates capital with the expectation of receiving financial returns.
  - a. entrepreneur
  - b. stockbroker
  - c. politician
  - d. investor

4. It is used to describe the ownership certificates of any company and is also known as shares and equity.
- a. bond
  - b. stockbroker
  - c. stock
  - d. commission
5. A business formed to manufacture or supply products or services for profit.
- a. stock
  - b. company
  - c. stock
  - d. bond
6. An activity in which money is put at risk for the purpose of making a profit.
- a. Invest
  - b. sell
  - c. buy
  - d. collect
7. What is a bond's coupon?
- a. the purchase price of a bond
  - b. the interest earned to be paid by the bond issuer
  - c. the value of a bond at its issue date
  - d. the value of a bond at its maturity date
8. What is a bond?
- a. a certificate of ownership in a corporation, with the right to a share of the earnings
  - b. a payment from an investor to a corporation for the rights to future profits
  - c. a group of stocks sold together for a set price
  - d. a certificate representing a loan from an investor to a corporation or government entity
9. Why would someone buy a bond instead of a stock?
- a. It is a less risky investment.
  - b. To have ownership in a company
  - c. It can yield a higher return on investment.
  - d. To receive dividend payments
10. What is a stock dividend?
- a. a capital gains
  - b. the price the stock is sold for
  - c. part of the company's profits that is paid to owners
  - d. the price paid when stock is sold to an investment bank
11. When people buy stock on a stock market. They are considered as \_\_\_\_\_.
- a. the people selling the stock receives the money.
  - b. the corporation loses money.
  - c. the corporation receives the money.
  - d. the people buying the stock receives the money.

12. Which of the following best defines liquidity?
- Investing in several different assets with unrelated risks.
  - The expenses of negotiating and executing an exchange.
  - The ability to convert a store of value to cash.
  - The amount that will be repaid at the end of a bond's term.
13. One-way people can earn money from stocks is by
- selling the stock for a lower price than the price they paid for the stock.
  - buying stock from an investment banker.
  - selling the stock for the same price as they paid for the stock.
  - selling the stock for a higher price than the price they paid for the stock.
14. If the interest rate on bonds increases, which of the following is the most likely result?
- The supply of money decreases.
  - Bond prices increase.
  - The transaction costs associated with holding money increases.
  - People are willing to hold less wealth in the form of money.
15. All of the following are reasons to buy bonds **EXCEPT**:
- Bonds generally have outperformed the stock market over the last 100 years.
  - Bonds pay out interest at set intervals, allowing people to live off the income.
  - Bonds may outperform the stock market during certain periods of time.
  - Investing in bonds may generate less tax liability than investing in stocks.

## Lesson

# 1

## Stocks and Bonds

Let's say that it's time to invest your money. So, how exactly are you going to allocate that money? After all, a well-diversified portfolio strategy is recommended before you start to buy assets such as stocks and bonds. Indeed, stocks and bonds are two of the most traded types of assets—each available for sale on several different platforms or through a variety of markets or brokers. Here, we go over the primary differences between stocks and bonds.



### What's In

Definition of Terms. Complete each statement by choosing the correct answer in the given word box. Write the corresponding letter of each number on the blanks to unlock the bible scripture.

#### Words to Treasure!

The L \_ \_ D is my sh \_ \_ \_ e r \_ , I l \_ \_ k \_ o t h i n \_ .

1 2

3 4 5

6

7 8

9

10

Psalm 23:1

a. stock market

c. dividend

d. stock

e. debtor or borrower

h. interest

g. bond

n. stockbroker

o. market value

p. principal

r. investor

1. The current price of a stock at which it can be sold is called \_\_\_\_\_.
2. A person or institution who invests the money or make the funds available is called \_\_\_\_\_.
3. A person or institution who owes the money or avails of the funds from the lender is called \_\_\_\_\_.
4. The amount of money borrowed or invested on the origin date is called \_\_\_\_\_.



5. The amount paid or earned for the use of money is called \_\_\_\_\_.
6. A stake of ownership in a company that is sold off in exchange for cash is called \_\_\_\_\_.
7. An equity market where regular activities of buying, selling, and issuance of shares of publicly-held companies take place is referred to as \_\_\_\_\_.
8. A sum of money paid by a company to its shareholders out of its profits is called \_\_\_\_\_.
9. An investment adviser who executes buy and sell orders for stocks and other securities on behalf of clients is called as \_\_\_\_\_.
10. A debt that the company or entity enters into with the investor that pays the investor interest on that debt is referred as \_\_\_\_\_.



### ***Notes to the Teacher***

This module will help you to teach your students the importance of stocks and bonds and how will you positively influence them on investment decisions and to be financially literate. You can also prepare additional activities, resources, videos to feed additional inputs as you may feel appropriate that will deepen the learners understanding.



## ***What's New***

Read carefully the lyrics of the song, you may sing the song in the tune of “Row, row, row your boat” to emphasize how people can save with stocks and bonds.

### **Stocks and Bonds**

Stocks, stocks, stocks are shares

That pays a dividend.

Gradually, gradually, gradually, gradually

Investing then you earn.

Stocks, stocks, stocks, they change

The price goes low or high.

Gradually, gradually, gradually, gradually

Money goes round and round.

Bonds, bonds, bonds are loans

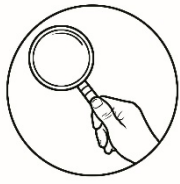
That pay an interest

Gradually, gradually, gradually, gradually

Growing while you wait.

### **Questions to Ponder**

1. Based on the given song, can you define stocks? How about bonds?
2. Distinguish the difference between stocks and bonds?
3. Between stocks and bonds, which do you prefer to invest your money? Why?



## ***What is It***

Stocks and bonds are the heartbeat of the economy. Much of the world's business activity would be impossible without stocks and bonds. But whether you trade on the Philippine Stocks Exchange, financial terms can always be confusing. So, before you invest in a stock or a bond, you need to know - what is the difference? And which one should you choose?

Stocks and bonds are certificates that are sold to raise money for starting a new company or for expanding an existing company. They are also called securities, and people who buy them are called investors.

### **STOCKS**

Companies sell shares of ownership in their company to raise money to finance operations, plan expansion, and so on. These ownership shares are called **stocks**. The buyers of the stock (**stockholders**) receive **stock certificates** verifying the number of shares of stocks they own. The two basic types of stocks are **common stock** and **preferred stock**.

Common stockholders have voting rights. Preferred stockholders do not have voting rights, but they receive preference over common stockholders in **dividends** (payments from profit) and the company's assets if the company goes bankrupt. **Stock Market** provides an orderly trading place for stock wherein prices or **market value** vary from day to day and within a day. Only **stockbrokers** who specialize to work in the stock market can trade on the floor. The broker receives a **commission** for the services of both buying and selling stocks.

### **BONDS**

Sometimes companies raise money by selling bonds instead of stock. When you buy a stock, you become a part-owner in the company. To raise money, companies may not want to sell more stocks and thus dilute the ownership of their current stock owners, so they sell bonds. A **bond** is a form of long-term investment issued by a corporation or government where the purchaser becomes a creditor of the company. It represents a promise from the company to pay the face amount to the bond owner at a future date, along with interest payments at a stated rate. The company, state or municipality that issues the bond is called the **issuer**.

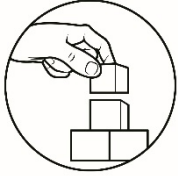
The annual interest paid by the issuer to the lender (bond holder) on the bond is referred to as the **coupon**. The **coupon rate** is the annual payout as percentage of the bond's par value. Bonds have two kinds of values. These are par value and

market value. The **par value** of the bond is the same as its face value while the **market value** of a bond is the price at which the bond is being sold. It may be greater than or less than the amount of the par value. If the market value is greater than the par value, then the bond is selling at a **premium**. If the market value is less than the par value, then the bond is selling at a **discount**.

**Now I know!**

Investors are always told to diversify their portfolios between stocks and bonds, but what's the difference between the two types of investments? Here's a look at the difference between stocks and bonds on the most fundamental level.

<b>Basis for Comparison</b>	<b>Stocks</b>	<b>Bonds</b>
<b>Definition</b>	A form of equity instrument or raising money by allowing investors to be part owners of the company.	A form of debt instrument or raising of money by borrowing from investors.
<b>Issuers</b>	Corporates	Government Institutions, Financial Institutions, Companies etc.
<b>Status of Holders</b>	Shareholders are the owners of the company.	Bondholders are the lenders to the company.
<b>Form of Returns</b>	Profits earned by the company are paid in the form of Dividends.	Interest payments are made in the form of Coupon Payments.
<b>Risk Level</b>	The risk level is high since it depends upon the performance of the issuer, so no guaranteed returns.	The risk level is relatively low since bondholders are prioritized for repayments.
<b>Major Risks Associated</b>	Market Risk, Business Risk	Interest Rate Risk, Inflation Risk
<b>Additional Benefit</b>	Shareholders get the right to vote.	Bondholders get the preference in terms of repayment and on liquidation.
<b>Market Value</b>	When interest rates fall significantly, the market stock value rises.	When market interest rates decrease, the market value of an existing bond increases.



## ***What's More***

Group the following characteristics of stocks and bonds and write on the space provided.

- |  |
|--|
| <ul style="list-style-type: none"><li>✓ offers fixed interest rate</li><li>✓ makes profit by dividend</li><li>✓ debt instrument</li><li>✓ equity instrument</li><li>✓ own a small piece of the company</li><li>✓ sold by Government and financial institution</li><li>✓ lower risk with lower reward</li><li>✓ higher risk but with higher reward</li><li>✓ market value varies everyday</li><li>✓ has a maturity date</li></ul> |
|--|

<b>Stocks</b>	<b>Bonds</b>

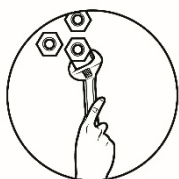


## ***What I Have Learned***

Complete the following statements by writing the correct word or words.

1. When a company goes to sell a \_\_\_\_\_, they decide to sell a certain amount of shares of ownership in their company that they will give up in exchange for cash from investors.
2. A stock is a security in that company that can also be referred to as equity or a \_\_\_\_\_.
3. Those who own \_\_\_\_\_ stock in a company typically have voting rights in shareholder's meetings and may even receive dividends, while \_\_\_\_\_ stock owners do receive dividends but don't always receive voting rights.

4. \_\_\_\_\_ are fixed-income investments, which operate from a fixed interest rate and a fixed amount of time wherein the company, government, or other will repay the money plus the interest.
5. A \_\_\_\_\_ represents a collection of shares in a company which is entitled to receive a fixed amount of dividend at the end of relevant financial year, whereas \_\_\_\_\_ is associated with debt raised by the company from outsiders which carry a fixed ratio of return each year and can be earned as they are generally for a fixed period of time.



## ***What I Can Do***

### **Perform the task below.**

Suppose you have savings in the bank that you want to invest in stocks and bonds instead of setting up in a new business. Write one to two paragraphs discussing what method you can use to make the investment and explain the reasons for your decision.

<b>Content Area Rubric</b>	
3	<ul style="list-style-type: none"> <li>✓ Use of the skills of evaluation, analysis, and synthesis is apparent.</li> <li>✓ Sound reasoning is employed.</li> <li>✓ Appropriate and accurate specific examples are cited and Explained.</li> </ul>
2	<ul style="list-style-type: none"> <li>✓ Use of the skills of synthesis and analysis is apparent.</li> <li>✓ Reasoning employed is on the inferential level.</li> <li>✓ Appropriate examples are cited and explained, however, some inaccurate information is included.</li> </ul>
1	<ul style="list-style-type: none"> <li>✓ Use of literal skills is apparent.</li> <li>✓ Reasoning employed is on the concrete level.</li> <li>✓ Some examples may be cited, may attempt to be explained, and inaccurate information is included.</li> </ul>
0	<ul style="list-style-type: none"> <li>✓ There is little or no evidence of any apparent skills.</li> <li>✓ There is little or no evidence of any reasoning employed.</li> <li>✓ Examples, if cited, are inaccurate or inappropriate.</li> </ul>



## Assessment

Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

- What is another term for stock?
  - bond
  - debenture
  - debt instrument
  - equity instrument
- It is a type of stock for which stockholders get first choice in distributed profits.
  - common stock
  - stock market
  - face value stock
  - preferred stock
- Another term for a bond's face value.
  - par value
  - coupon
  - maturity
  - final payment
- A bond that pays all of its interest and principal at the bond's maturity date.
  - bond fund
  - par-value fund
  - coupon bond
  - zero-coupon bond
- Which financial assets carries the most risk?
  - bond
  - stock
  - savings deposits
  - checking deposits
- Which is the LEAST risky investment?
  - stocks
  - corporate bond
  - Philippines treasury bonds
  - mutual funds
- A person or agent who trades for you and charges a fee or commission for executing buys and sells of stocks through a stock exchange.
  - stockbroker
  - stockholder
  - entrepreneur
  - politician
- What is stock portfolio?
  - The online tool used to track stock prices.
  - A list of all the stocks you own.
  - The document that you receive for purchasing stock.
  - A group of stocks that you can purchase at one time on a stock exchange.
- Why do people buy stocks?
  - There is no chance of a loss.
  - They expect to earn a return.
  - The government encourages them to buy stock.
  - They are guaranteed interest payment each year.
- What is the best explanation of a bond?
  - It is an ownership interest in a company.
  - It is an equity or share in a company.
  - It represents a corporate or government debt obligation.
  - It is a debt instrument.

11. Diversifying can occur by
  - a. buying different stocks and bonds in different industries.
  - b. buying similar stocks and bonds in the same industries.
  - c. buying similar stocks and bonds in different industries.
  - d. buying different stocks and bonds in the same industries.
12. Which best defines the risk of a financial asset?
  - a. Investing in several different assets with unrelated risks.
  - b. The amount that will be repaid at the end of a bond's term.
  - c. The probability that an asset will lose value.
  - d. The uncertainty that an asset might gain or lose value.
13. Why would someone choose to put money in stocks as opposed to a savings account that earns interest?
  - a. They are guaranteed a return in stocks.
  - b. There is a potential to earn more money in the stock market.
  - c. They are guaranteed a return in a savings account.
  - d. There is a potential to earn more money in the savings account.
14. What happens to the price and interest rate of a bond if the demand for that bond increases?
  - a. Price increases; interest rate is unaffected.
  - b. Price is unaffected; interest rate is unaffected.
  - c. Price increases; interest rate decreases.
  - d. Price decreases; interest rate decreases.
15. Several years ago, Company A issued bonds to raise funds so that it could buy equipment. Those bonds were purchased by the Bank of the East. However, the Bank of the East has decided that it doesn't want to have any assets in the form of bonds, so it is selling off all the bonds that it owns. Which of the following is most likely to be the result of this action?
  - a. The default risk of the bonds will increase.
  - b. Bond prices will increase.
  - c. The face value of the bonds will decrease.
  - d. Interest rates will increase.

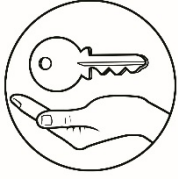


## ***Additional Activities***

### **Journal Writing**

Write a journal on the saying “Do not put all your eggs in one basket” by relating the lesson on stocks and bonds.





## Answer Key

**What I Know**

1. b
2. c
3. d
4. c
5. b
6. a
7. b
8. d
9. a
10. c
11. a
12. c
13. d
14. d
15. a

**What's In**

1. o
2. r
3. e
4. p
5. h
6. d
7. a
8. c
9. n
10. g

**What's More**

**Stocks:**

- ✓ makes profit by dividend
- ✓ equity instrument
- ✓ own a small piece of the company
- ✓ higher risk but with higher reward
- ✓ market value varies everyday

**Bonds:**

- ✓ offers fixed interest rate
- ✓ debt instrument
- ✓ sold by Government and financial institution
- ✓ lower risk with lower reward
- ✓ It has a maturity date

**What I Have Learned**

1. stock
2. share
3. common, preferred
4. bond
5. stock, bond

**Assessment**

1. d
2. d
3. a
4. c
5. b
6. c
7. a
8. b
9. b
10. c
11. a
12. d
13. b
14. c
15. c

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