Second Year Baccalaureate

FINANCIAL LITERACY





SPRIX

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Acknowledgment

We extend our sincere thanks and deepest appreciation to Al-Azhar Al-Sharif for its dedicated efforts in reviewing this valuable book, and for its contribution to ensuring the accuracy of its content, its linguistic and scientific soundness, and its alignment with the values, customs, and authentic traditions of Egyptian society. This reflects Al-Azhar Al-Sharif's long-standing prestige and its pioneering role in serving the educational process and in supporting and advancing education.

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Introduction

Financial decisions affect wide-ranging aspects of a person's life; they determine how resources are used, how priorities are set, and how one prepares for future needs. Awareness of these decisions is becoming increasingly important in a world where financial services are growing more diverse, payment and financing technologies are advancing rapidly, and opportunities and risks are increasingly intertwined. Financial literacy therefore represents an essential part of preparing students for life, providing them with the knowledge and skills needed to make informed choices and take responsibility for their decisions.

The study of this subject aligns with the direction of the Ministry of Education and Technical Education toward developing financial and economic awareness among students, and promoting a culture of saving, investment, and entrepreneurship from the early stages of education. It also reflects the Egyptian state's efforts to spread financial literacy, expand financial inclusion, and empower young people to deal wisely and responsibly with financial and digital services. And these are directions that support the building of human capabilities and economic participation within the framework of Egypt's Vision 2030.

This book provides second-year baccalaureate students with a foundation for understanding the relationship between an individual's financial decisions and the economic activity of society. It progresses from the role of money and finance, the fundamentals of economics, and Zakat, to personal resource management and financial planning, then to entrepreneurship, investment, and wealth management, and finally to the impact of artificial intelligence on finance and the future of business. This progression helps students recognize the connection between what they learn at school, the situations they face in daily life, and what they are preparing for in their academic and professional paths.

The book aims to develop the ability to read financial information and understand its implications, prepare budgets, prioritize needs, set savings goals, and weigh alternatives in light of available resources. It also draws attention to costs, obligations, and contractual terms, to the relationship between return and risk, and to the importance of planning before making a decision. These skills gain their true value when students apply them to interpret real-life situations, justify their choices, and review the outcomes that result from them.

Ethical and social responsibility is present throughout the book's topics; money is connected to work, production, and the rights of others, and its proper management requires honesty, moderation, and the fulfillment of obligations. In this context, the book addresses Zakat and Islamic finance among its topics, and links financial awareness to an understanding of the impact of economic behavior on the family and society. It also gives attention to data protection and privacy, the verification of financial information and offers, and an awareness of the limitations of artificial intelligence tools and human responsibility for their use.

The exercises and activities have been designed to connect concepts with practical application, enabling students to calculate, compare, analyze, and build well-reasoned opinions. Extension activities provide opportunities for project-based research, the use of spreadsheets, and the preparation of business plans. Students benefit from these activities through participation in discussion, examination of assumptions, listening to different viewpoints, and review of solutions in light of the evidence, all of which nurture independent thinking and sound judgment.

The goal is for students to complete their study of this subject better equipped to manage their financial affairs, understand the economic environment around them, and engage with its developments with awareness and responsibility. Building financial literacy is an investment in young people's ability to plan for their future, transform their knowledge into practices that benefit themselves and their families, and contribute to the economic life of their society.

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Point!

1. Why Money Developed

(**Barter**): Exchanging what people have with one another as a means of obtaining what they need has long been practiced in many regions.

Problems of barter

- It is difficult to compare the value of different goods.
- (**A double coincidence of wants**) is required.

  (A must have what B wants, and B must have what A wants.)
- Some goods cannot be stored for a long time.

  → In many societies, various forms of (**Money**) developed as widely accepted means of payment to make exchange easier.
- The things used as money have changed over time.

Shells and Stones → Metal Coins → Banknotes → Electronic Money



- The means of exchange did not develop in the same way or in the same order in every society. Today, however, some form of money is widely used as a medium of exchange in most parts of the world.
- Banknotes are one important form of money in circulation today. But why are banknotes, which are merely pieces of paper, accepted as having value?

  (**Convertible Banknotes**): banknotes that are guaranteed to be exchangeable for a certain amount of gold or silver.

  (**Fiat Money**): banknotes that are not guaranteed to be exchangeable for gold or silver.

  → (**Trust**): Almost all modern banknotes are fiat money. Even so, banknotes are regarded as "things that have value" and "things that can be used to buy goods" because people trust the government and the central bank that issue them.
- (**Hyperinflation**): a situation in which the value of money falls rapidly and the prices of goods rise sharply.

  : Trust in the government or other authority that issues the currency declines.

  : Many people stop believing that banknotes will continue to have the same value in the future.

  : Sellers stop accepting the previous prices for goods, and prices rise.

  → In today's world, where fiat money is the main form of money, it is important to maintain systems that protect the trust supporting the value of banknotes.

2. The Three Functions of Money

Money has three functions.

(i) (**Unit of Account**)

→ By using money as a common unit, people can express and compare the prices of different things.
If 10 kilograms of rice costs 250 EGP and one soccer ball costs 120 EGP, you can quickly tell that the rice is more expensive.

(ii) (**Medium of Exchange**)

→ Money can be used to pay for goods and services, making exchange smoother.
Paying in cash and having a payment deducted from a bank account are both examples of money functioning as a medium of exchange.

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(iii) (**Store of Value**)

→ Unlike food that spoils or things that break easily, money can preserve its value for a relatively long period of time.

However, this function as a store of value is not perfect. If something that could be bought for 100 EGP 20 years ago now costs 120 EGP, this means that the value of 100 EGP has decreased rather than being fully preserved. → (**Inflation**)

3. Money and Payment Methods Today

(a) Electronic Money and Digital Payments

Today, money can also perform its three functions through various electronic means.

(i) (**Electronic Money**)

A system in which monetary value based on funds paid in advance by the user is recorded electronically and used for payment.

The recorded value may be accessed through a card or mobile wallet.

(ii) Mechanisms and Methods Used for Digital Payments

Methods of making payments through electronic records or communications without directly exchanging cash.

The location where the funds are held and the timing of payment differ depending on the method.

(**Bank Account**)

A system in which a bank manages funds as deposits.

When a bank account is used for payment, the amount is deducted from the available balance.

Fees and conditions differ depending on the type of account and transaction.

(**Payment Card**)

A tool used to access funds or a credit line and make payments.

The source of funds and timing of payment differ depending on the type of card.

(**Mobile Wallet**)

A service that allows users to make payments through electronic money, bank accounts, payment cards, and other methods using a smartphone or similar device.

Usage limits, fees, authentication methods, and other security rules differ depending on the service.

(b) Central Banks and Legal Tender

(**Central Bank**): A special bank that issues banknotes and adjusts the amount of money circulating in the economy in order to stabilize the flow of money in a country.

In Egypt, this role is played by (**the Central Bank of Egypt (CBE)**).

(**Legal Tender**): A currency issued by a government or central bank and officially recognized by law as a means of settling debts.

Cash, such as banknotes and coins, carries the risk of loss or theft. In addition, inflation may reduce the amount of goods and services that can be purchased with the same amount of money.

(c) Central Bank Digital Currency (CBDC) and Crypto-assets

(**CBDC**): A digital form of money issued by a central bank. It is denominated in the country's currency.

Its legal status, uses, risk controls, and user protection mechanisms depend on how the issuing central bank designs the system and on each country's legal framework.

It does not take the form of coins or banknotes in the first place, but exists only as digital data.

(**Crypto-assets**): Digital assets that are generally not issued by public authorities such as central banks or governments. A digital asset is an asset that exists as electronic data and can be held and traded online. Bitcoin and Ethereum are common examples.

Crypto-assets are not equivalent to legal tender. Their market prices can fluctuate greatly because they are strongly affected by market supply and demand and changes in users' expectations. They also involve risks such as fraud, loss of access, and limited user protection.

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(d) Digital Payments and Financial Inclusion

(**Financial Inclusion**): The idea that everyone should have access to financial services, such as bank accounts and money transfers.

Some electronic money services and mobile wallets that do not require a bank account may make financial services easier to access for people who have difficulty opening a bank account or reaching a financial institution.

CBDCs may also help promote financial inclusion, depending on their design and the conditions in which they are used.

Try

1. Answer the following questions.

(a) Explain what it means that one difficulty of barter is that a "double coincidence of wants" is necessary.

(b) Fiat banknotes are pieces of paper and are not exchangeable for a fixed amount of gold or silver. Using the word "trust," explain why they are accepted as having value.

(c) Which function of money is at work in each of the following situations?

(i) Buying a soccer ball at a store for 120 EGP.

(ii) Rice is priced at 25 EGP, and a soccer ball is priced at 120 EGP.

(iii) Keeping 500 EGP to use next month.

2. Answer the following questions.

(d) What is the function of money that allows it to be saved and used in the future called?

(e) What is the function of money that allows it to be used for payment called?

(f) What is the function of money that allows the prices of different goods and services to be expressed and compared called?

(g) Explain what kind of phenomenon inflation is.

(h) If the amount of savings remains unchanged while prices rise, what happens to the purchasing power of those savings? Explain why.

3. Answer the following questions.

(i) Explain what electronic money is and how it is used for payment.

(j) Explain what CBDC is and what determines its legal status and uses.

(k) Explain what crypto-assets are and how they differ from legal tender.

(l) A post claims that a particular crypto-asset is "approved by the government and guaranteed in value." What should you check before believing this information or purchasing the crypto-asset?

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Point!

1. What Finance Is: Connecting People with Surplus Funds and Those Who Need Funds

(**Finance**): A system that transfers funds from people or organizations with surplus funds to those who need funds. It is broadly divided into direct finance and indirect finance.

(a) (**Direct Finance**): A method in which companies raise funds directly from investors by issuing stocks or bonds.

(**Stock**): A unit of ownership in a company issued to raise money for the business.

(**Bond**): A certificate issued by a government or company to borrow money from investors.

(b) (**Indirect Finance**): A method in which financial institutions collect funds from depositors and lend them to companies or individuals.

Banks sometimes use deposited money to purchase stocks and bonds. However, depositors do not purchase a company's stocks or bonds directly. Because funds are provided through banks, this is considered indirect finance.

(c) Cost of using funds

When using funds, different types of costs or financial obligations may arise depending on the type and structure of the transaction. Examples include (**interest**), fees, rent, a fixed amount added to the purchase price of goods, and a share of the profits paid to the provider of the funds.

When interest is charged, the percentage used to calculate it is called (**the interest rate**).

→ Companies and individuals must carefully consider the cost.

(**Crowdfunding**): A system in which many people each provide a small amount of money through the internet to support a business or project. Crowdfunding can take various forms, and the applicable rules differ depending on how the funds are raised and what the fund providers receive in return. In Egypt, crowdfunding must be conducted in compliance with applicable laws and regulations.

2. Types and Roles of Financial Institutions

(**Financial Institutions**): Organizations that support the flow of funds in society by supplying, managing, and transferring funds. Providers of financial services include banks, non-bank financial institutions, and postal service providers.

(a) Banking Sector

(**Commercial Banks**): Banks where people use financial services such as deposits, withdrawals, and payments. They collect funds from depositors, lend money to companies and individuals, and provide other authorized banking services.

→ They play a role in transferring funds from entities with surplus funds to those that need funds.

(**Central Bank**): A bank responsible for issuing banknotes, maintaining price stability, and ensuring the stability of the financial system. Ordinary people cannot deposit money with a central bank, which mainly conducts transactions with the government and commercial banks.

→ A central bank adjusts the amount of money in circulation, supports the stable operation of commercial banks, and maintains the economic system and trust in money.

In Egypt, the Central Bank of Egypt (CBE) performs this role and regulates and supervises banking and payment activities within the scope of its authority.

(b) Non-bank Financial Institutions

Institutions that provide financial services without operating as banks, under authorization and supervision based on applicable laws and regulations. They may provide services such as securities trading, insurance, consumer finance, and microfinance.

In Egypt, the Financial Regulatory Authority (FRA) regulates and supervises designated non-bank financial markets and services.

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(**Securities Companies**): They facilitate the buying and selling of stocks, bonds, and other securities and support companies in raising funds.

(**Insurance Companies**): They collect premiums from many policyholders and, under insurance contracts, provide compensation when economic losses arise from specified risks such as accidents and illness.

→ However, insurance does not eliminate the risks themselves. It is a system for preparing for the economic losses caused by those risks.

(**Microfinance Institutions**): They provide small loans and financial services to low-income people and others who have difficulty accessing banks.

→ They may support stable living and small business activities and contribute to poverty reduction and economic development.

(c) Postal Service Providers

In some countries, postal service providers offer authorized financial services such as savings, payments, money transfers, and insurance in addition to postal services. The services they may provide and their regulatory status differ from country to country.

In Egypt, Egypt Post provides authorized financial services in addition to postal services.

Note: The functions of each institution and the authorities responsible for regulating them are described as of the publication of this textbook in 2026. The applicable system should be confirmed at the time of use.

3. Finance Moves Society

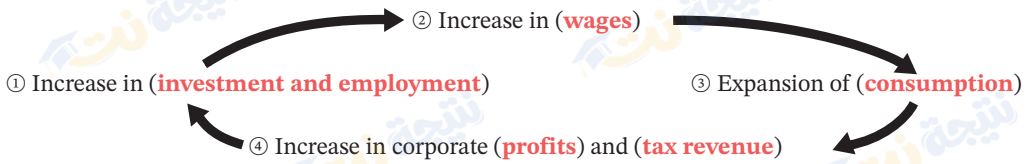
(a) A virtuous cycle of the economy

(**Business Investment**): Spending by companies on factories, machinery, equipment, technology, and other resources to increase future production and profits.

Effects of Investment

- If an investment is successful, it may improve a company's productivity and increase its profits.
- If investment creates more jobs, workers may spend their wages, increasing demand for goods and services.
- Higher corporate profits and greater consumption may increase tax revenue and help support (**public services**).

An Example of a Virtuous Cycle in the Economy



→ Finance supports the smooth movement of funds by providing money to companies and individuals who lack the funds needed to make necessary investments. This system helps maintain the circulation of money and contributes to economic growth.

However, these effects do not occur automatically. They depend on factors such as demand, improvements in productivity, financing conditions, costs, and how the investment is planned and carried out.
For example, if demand is weak or costs rise, corporate profits may not increase, making further investment and job creation less likely.

(b) Financial exclusion and financial inclusion

(**Financial Exclusion**): A situation in which people are unable to access financial services due to economic, geographical, social, digital, or other factors.

(**Financial Inclusion**): The idea that everyone should have access to financial services.

(**FinTech**): The use of digital technology to make financial services, such as smartphone payments and money transfers, more convenient and efficient.

→ It may expand access to financial services and shorten transaction times. On the other hand, problems such as fees, fraud, data security risks, and service disruptions may arise, and a certain level of digital literacy is also necessary to use these services safely.

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(c) (Gam'eya): An informal type of "Rotating Savings and Credit Association (ROSCA)" based on trust among participants. Participants contribute a fixed amount of money regularly and receive the collected amount in turn.

→ It may help people who have difficulty accessing banks to save money and secure funds. On the other hand, because it is an informal system that depends heavily on trust among participants, some participants may fail to make their contributions, and disputes may arise.

Try

1. Answer the following questions.

(a) Explain what role finance plays in the economy.

(b) Explain the difference between direct finance and indirect finance.

(c) Explain what kinds of costs or obligations may arise when using funds through financial transactions.

2. Answer the following questions.

(d) Explain what role the central bank plays that commercial banks do not.

(e) Explain what role securities companies play.

(f) What are microfinance institutions? Also explain what kinds of people they serve.

(g) For each of the following needs, identify the most relevant type of institution.

(i) Opening a bank account

(ii) Preparing for economic losses caused by accidents or illness

(iii) Making payments or transferring money through a postal service provider

(iv) Using authorized financial services, such as securities trading or microfinance, provided by institutions other than banks

3. Answer the following questions.

(h) Explain what kind of state a virtuous cycle of the economy is.

(i) What factors may interrupt a virtuous cycle in the economy, and how do they affect the cycle?

(j) Financial exclusion and financial inclusion are opposite terms. Explain the difference by contrasting them.

(k) What is a Gam'eya? Also explain one benefit and one risk of using it.

(l) Suppose a person has difficulty reaching a branch of a financial institution. Identify one service that could improve their access to financial services and state two risks that should be considered when using it.

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Point!

This lesson introduces core concepts from three areas of economics: microeconomics, macroeconomics, and international economics.

Microeconomics: the branch of economics that deals with decisions made by individuals and firms (e.g., supply and demand, market competition).

Macroeconomics: the branch of economics that deals with the economy as a whole (e.g., GDP, inflation, unemployment, fiscal and monetary policy).

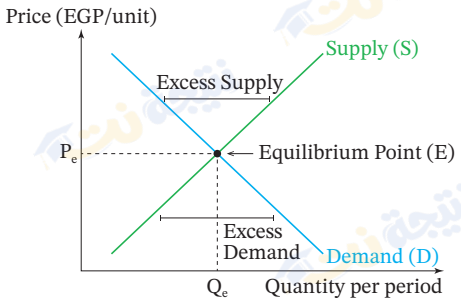
International Economics: the branch of economics that deals with economic relationships between countries (e.g., trade, exchange rates, trade balance).

1. Market Mechanisms and Prices

(**Market**): A system or framework in which sellers and buyers meet to exchange goods and services.

→ It is not merely a physical place, but a system in which prices and quantities are determined through interactions between buyers and sellers.

(a) Price Determination by Demand and Supply



- (**Supply**)(S): The quantity people want to sell. As the price falls, it (**decreases**), and as the price rises, it (**increases**); therefore, the supply curve slopes upward.
- (**Demand**)(D): The quantity people want to buy. As the price falls, it (**increases**), and as the price rises, it (**decreases**); therefore, the demand curve slopes downward.
- (**Equilibrium Point**)(E): The point where the supply curve and the demand curve intersect. At this point, the quantity demanded and the quantity supplied are equal, and the equilibrium price and equilibrium quantity are determined.
- (**Equilibrium Price**)(P_e): The price at the equilibrium point.
- (**Equilibrium Quantity**)(Q_e): The quantity traded at the equilibrium point.
- (**Excess Supply**): When the price is higher than the equilibrium price, the quantity supplied exceeds the quantity demanded, leaving the difference unsold. Other things being equal, if the price is allowed to adjust, it tends to (**fall**).
- (**Excess Demand**): When the price is lower than the equilibrium price, the quantity demanded exceeds the quantity supplied, creating a shortage equal to the difference. Other things being equal, if the price is allowed to adjust, it tends to (**rise**).

→ Other things being equal, when prices are allowed to adjust in a market, they move in a direction that reduces excess supply or excess demand and approaches the equilibrium price.

(b) Market Competition and Prices

- (**Perfect Competition**): a state in which many firms compete freely; firms follow the market price.
- (**Monopoly**): a state in which a single firm dominates the market; the firm has substantial influence over the market price.

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• (Oligopoly): a state in which a few firms dominate the market; firms set prices while considering each other's actions.

→ The way prices are determined differs depending on the competitive structure of the market.

(c) (Price Elasticity): The degree to which demand changes in response to a change in price. It tends to be (low) for necessities and (high) for goods that people can live without.

2. Economic Indicators

Economic activity is difficult to observe directly, so numerical indicators are used to understand it. In addition, because economic activity has many different aspects, no single indicator can provide a complete picture, and multiple indicators need to be considered together.

(a) (GDP (Gross Domestic Product))

The total value added generated through the production of goods and services within a country over a certain period.

GDP can be measured as nominal GDP, which is calculated using current prices, or as real GDP, which removes the effects of price changes.

→ GDP is a basic indicator showing the size of an economy. An increase in real GDP generally indicates an increase in the volume of goods and services produced, excluding the effects of price changes. However, GDP alone does not show how income is distributed or whether people's quality of life has improved.

(The Economic Growth Rate): The percentage change in real GDP compared with the previous year.

(Example: If real GDP increases from 100 in the previous year to 105 in the current year, the economic growth rate is $(105 - 100) \div 100 \times 100 = 5\%$.)

(b) CPI and Inflation Rate

• (CPI (Consumer Price Index)): Measures changes in the prices of goods and services purchased by households.

• Inflation rate: the rate at which prices increase.

Sustained price increases = (Inflation) Sustained price decreases = (Deflation)

(c) (Unemployment Rate)

The proportion of people who are willing and able to work but are not employed.

→ It tends to decrease when the economy improves.

(d) International Transactions and Foreign Exchange

(Trade Balance): The balance between the value of goods exported to foreign countries and imported from foreign countries.

(A surplus) occurs when exports exceed imports, while (a deficit) occurs when imports exceed exports.

(Current Account): The balance that includes trade in goods and services, income received from and paid to other countries, and current transfers.

(Foreign Exchange Rate): The rate at which one currency can be exchanged for another.

• Suppose that the exchange rate changes from 1 USD = 50 EGP at the beginning of the month to 1 USD = 52 EGP at the end of the month. This can be interpreted as the value of the U.S. dollar becoming (higher) relative to the EGP and the value of the EGP becoming (lower) relative to the U.S. dollar.

In this case, the EGP equivalent of an imported product costing 20 USD increases from 1,000 EGP to 1,040 EGP before other costs are considered.

• Conversely, suppose that the exchange rate changes from 1 USD = 50 EGP at the beginning of the month to 1 USD = 48 EGP at the end of the month. This can be interpreted as the value of the U.S. dollar becoming (lower) relative to the EGP and the value of the EGP becoming (higher) relative to the U.S. dollar.

In this case, the EGP equivalent of an imported product costing 20 USD decreases from 1,000 EGP to 960 EGP before other costs are considered.

→ When the value of the U.S. dollar rises relative to the EGP, an exporter receiving payment in U.S. dollars may receive more EGP. On the other hand, the cost of imported raw materials may also increase. Thus, the effects of exchange rate fluctuations differ depending on whether foreign currency is received or paid and whether goods are imported or exported.

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3. Economic Systems

(a) Supply Chain

(**Supply Chain**): The series of processes through which goods move from the procurement of raw materials, through production, transportation, and sales, until they reach consumers.

→ Because supply chains are globally interconnected, disruptions in one area can affect the entire world.

(b) Types of Economic Systems

- (**Market Economy**): Prices and production are determined by demand and supply.
- (**Planned Economy**): The government determines production and prices.
- (**Mixed Economy**): Based on a market economy, with government intervention.

→ These categories are simplified models rather than fixed divisions, and in reality, countries combine market-based decision-making with government laws, public services, taxation, and regulation to varying degrees.

(c) Policies for Economic Stability

A state in which economic activity is active and the economic growth rate is often high is called an economic boom. Although an economic boom is generally desirable, it is often accompanied by inflation. Therefore, governments and central banks try to control economic slowdowns and overheating through their respective policies.

- (**Fiscal Policy**): The government uses spending and taxation as tools to influence economic activity.
- (**Monetary Policy**): The central bank uses tools that influence money, credit conditions, and interest rates.

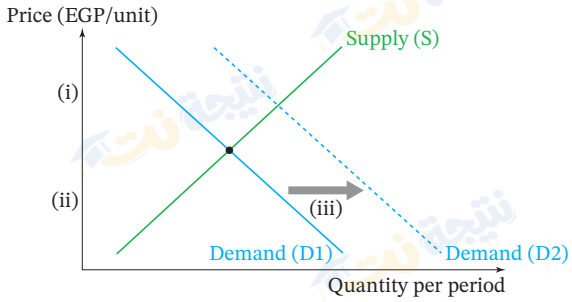
→ The effects of these policies vary depending on economic conditions and may not be immediate or certain.

Try

1. Answer the following questions.

(a) Explain what a market is.

(b) Look at the diagram below and answer the questions about the relationship between demand and supply.



- When the price of this product is at (i), how is the price likely to change in the future? Explain the reason. Assume that the demand curve remains at D1 and the supply curve remains at S.
- When the price of this product is at (ii), how is the price likely to change in the future? Explain the reason. Assume that the demand curve remains at D1 and the supply curve remains at S.
- Suppose that, for some reason, this product becomes more popular and the demand curve shifts to the right from D1 to D2, as shown by (iii). Explain how the equilibrium price and equilibrium quantity will change.

(c) Explain what kind of situation a monopoly is.

2. Answer the following questions.

(d) Explain what GDP is and the difference between nominal GDP and real GDP.

(e) Explain what CPI is.

(f) Explain what it means for Country A to have a "trade surplus" with Country B, using the words "value of imports" and "value of exports."

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(g) Suppose that the exchange rate changes from 1 USD = 50 EGP to 1 USD = 55 EGP. Assume that fees and other costs are not considered and that the U.S. dollar price of the imported product remains unchanged. Choose the most appropriate combination of the person who benefits from this change and the person whose financial burden increases.

A Person who benefits: A household receiving 100 USD from abroad
Person whose burden increases: A person purchasing an imported product priced at 20 USD

B Person who benefits: A person purchasing an imported product priced at 20 USD
Person whose burden increases: A household receiving 100 USD from abroad

C Both benefit.

D Both face an increased financial burden.

(h) Answer the following questions about the three hypothetical years below.

Year A: Real GDP growth rate: 4%, inflation rate: 7%, unemployment rate: 9%

Year B: Real GDP growth rate: 2%, inflation rate: 12%, unemployment rate: 10%

Year C: Real GDP growth rate: 3%, inflation rate: 6%, unemployment rate: 8%

(i) Compare Year A and Year B using two indicators.

(ii) Choose the year that appears to have the most balanced economic conditions and explain your reason using at least two indicators. Also, state one limitation of judging economic conditions using only these three indicators.

3. Answer the following questions.

(i) Explain what fiscal policy is and identify the main tools used by the government.

(j) Explain what monetary policy is and identify the areas that the central bank seeks to influence.

(k) In the modern world, disruption in the distribution of goods in one part of the world can affect the whole world. Explain why, using the term “supply chain.”

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Point!

Reviewed and approved by Al-Azhar Al-Sharif

1. What Is Zakat?

(Zakat): One of the Five Pillars of Islam. It is a mandatory system in which Muslims who possess wealth above a certain level contribute a portion of it so that it can be redistributed within society.

It is not merely a donation, but a (religious) obligation. At the same time, it is an act of purifying wealth and plays a role in achieving (social justice).

- It contributes to reducing poverty.
- It makes people who possess wealth aware of their (social responsibility).

Zakat also has economic effects.

- Encouraging capital use: It directs wealth not only to savings but also to (investment).
- Stimulating economic activity: The consumption of recipients creates (demand).

→ It is not only a religious duty but also a system that supports the stability and development of society and the economy.

(Sadaqah): A voluntary act of charity that differs from zakat. The amount, timing, and recipient are left to the giver's discretion, and it may also be given to non-Muslims.

2. Who Pays? and Who Receives?

(a) Conditions

- Being a (Muslim)
- Reaching the (nisab) (traditionally equivalent to about 85 grams of gold)
- Holding the wealth for (one year) (According to the Hijri calendar; for crops and fruits, however, it is due on the day of harvest.)
- Full ownership and exceeding basic living needs

→ These conditions protect necessary living assets and ensure a fair burden.

(b) Types and Rates:

Zakat is applied differently depending on the type of asset.

- Financial assets: (2.5)% is due on them after one full Hijri year has passed and the wealth has reached the nisab threshold.
- Gold and silver: (2.5)% is due on them once they reach the nisab threshold.
- Crops: (10)% for natural irrigation, (5)% for artificial irrigation
- Real Estate and Other Assets: Zakat is not imposed on residential property, but only on (rental income) or property intended for (trade).
- Goods and Stocks (Shares): calculated based on purpose (trade or investment) and value

The application of Zakat to real estate, rental income, and trading shares varies depending on the conditions applicable to each, the form of ownership, the purpose, and the intention. The information provided here is general and is not sufficient to determine the ruling in individual cases; such cases should be referred to a qualified Islamic scholar for a fatwa.

(c) (Zakat al-Fitr): A mandatory charitable payment made before Eid al-Fitr prayer to support the poor. It was traditionally paid in the form of food, although scholars have permitted giving its equivalent in cash.

(d) Zakat is distributed to specific categories of Zakat recipients defined by Islamic law and the Quran.

- (The poor): Those who cannot meet their basic needs
- (The needy): Those who have some means but not enough
- Zakat administrators: Those responsible for collecting and distributing zakat

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- Those whose hearts are to be reconciled — those who are given Zakat to soften their hearts, encourage them to embrace Islam, or strengthen their faith.
- The freeing of those in bondage: Support for freeing people from bondage
- (**The indebted**): Those burdened with debts they cannot repay
- In the cause of Allah: Activities serving the cause of Allah
- Stranded travelers: Travelers who have become stranded and lack the means to reach their homes and families. They may receive Zakat sufficient to enable them to return home.

3. The Socioeconomic Functions of Zakat and Islamic Finance

(a) The Socioeconomic Functions of Zakat

Zakat establishes a unique social system that brings together religion, ethics, and economics. This system works to:

- Reduction of (**economic inequality**)
- Support for (**socially vulnerable people**)
- Strengthening of (**trust within the community**)

(b) Islamic Finance

In Islam, earning profit by charging interest on loans, known as (**riba**), is prohibited. Islamic finance instead links financial returns to permitted assets, services, risk-sharing arrangements, or real economic transactions.

To be recognized as Sharia-compliant, a financial transaction must satisfy various conditions. Its name alone does not determine whether it is Sharia-compliant; its actual contractual terms and operation must also be considered.

(**Murabaha**): A type of Islamic finance in which a financial institution purchases an asset and resells it to a customer. The original purchase price, profit margin, and payment schedule are disclosed and agreed upon in advance.

(**Mudarabah**): A risk-sharing arrangement in which one party provides capital and another manages a business. Profits are shared according to an agreed ratio, and risks are borne according to the terms of the contract.

(**Sukuk**): Sharia-compliant investment certificates linked to specific assets, services, or investment activities. Investors receive the returns generated by those assets or activities, rather than interest (riba) on a loan.

Try

1. Answer the following questions.

(a) Explain why zakat can be said to play a role in achieving social justice.

(b) Explain why zakat is considered to have a positive effect on the economy.

2. Answer the following questions.

(c) Explain when the obligation to pay zakat arises, from the perspectives of “faith,” “amount of assets,” and “period of asset ownership.”

(d) State the zakat rate in each of the following cases.

(i) Financial assets (ii) Gold and silver

(iii) Agricultural products grown with natural irrigation

(iv) Agricultural products grown with artificial irrigation

(e) State the eight categories specified in the Quran to which zakat may be distributed.

3. Answer the following question.

(f) Explain what social functions zakat performs through the redistribution of wealth.

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Point!

1. Types and Forms of Businesses

A business is an organized activity that creates value by providing goods or services. Businesses vary in who owns them, what (**purposes**) they pursue, their size, how they (**raise funds**), and the legal form they take.

Some primarily pursue profit, while others, such as social enterprises and public enterprises, pursue social or public purposes.

(a) Private Enterprise and Public Enterprise

Private Enterprise: A business owned and operated by private individuals or organizations. Its primary purpose is to earn (**profit**) through business activities.

Public Enterprise: An enterprise owned or controlled by a public authority in accordance with the country's legal framework.

Its purpose is to serve the (**public interest**) (e.g., transportation and water services).

(b) Two Forms of Private Enterprises

(**Sole Proprietorship**): A form of business in which an individual runs the business independently. The procedures for starting are relatively simple.

(**Company**): A form of business organized under a defined legal structure and owned by one or more individuals or other organizations.

(c) Limited and Unlimited Liability

- (**Limited Liability**)

  A system in which responsibility is limited to the amount invested. Shareholders of corporations do not bear losses beyond their investment, making it easier for many people to invest.

- (**Unlimited Liability**)

  A system in which responsibility extends without limit. Business owners are responsible for the company's debts and may have to use their personal assets to repay them.

(d) Types of Businesses

(**Corporation**): A company that can raise funds by issuing shares. Its investors are called shareholders and have limited liability. This is the most common form of business organization and is well suited for raising large amounts of capital.

(**Limited Liability Company (LLC)**): A company in which all investors have limited liability. Compared with a corporation, it is generally easier to establish and operate, and is often used for small businesses.

(**Limited Partnership**): A company composed of both limited-liability investors and unlimited-liability investors. It has a structure in which some investors provide capital while others take greater responsibility for management.

(**General Partnership**): A company in which all investors have unlimited liability. It is often operated on the basis of strong trust among the investors.

(e) Non-profit Organization (NPO) and Non-governmental Organization (NGO)

(**NPO**): An organization that does not aim to make a profit but instead works to solve social issues and contribute to local communities.

(**NGO**): A private organization that operates independently of the government. It often works on issues such as environmental protection and human rights, and may operate across national borders.

These names and classifications are commonly used internationally, but actual business forms and terminology vary depending on each country's legal system and its social and historical context.

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2. Purpose and Role of Businesses

Many businesses, especially private enterprises, primarily pursue profit, but today they are also expected to consider their impact on society.

(a) Profit and Contribution to the Economy

(**Profit**): The earnings obtained by subtracting costs from revenue.

Profit is used for shareholder distributions (**dividends**) and for (**investments**), such as purchasing equipment and conducting research and development. It can also lead to increased (**employment**) as businesses expand. Some profit is retained as (**retained earnings**).

→ Investments create demand for the goods and services of other businesses. Increased employment raises income and expands consumption. As a result, the economy becomes more active.

(b) Ownership and Management

In large corporations, ownership and management are separated. Shareholders own the company, while managers run it.

(**Directors**), who are responsible for overseeing management, are elected at (**the shareholders' meeting**).

(c) (**Stakeholders**): Shareholders, employees, customers, business partners, and local communities—people and organizations affected by business activities.

→ Considering the interests of various stakeholders, rather than prioritizing only one group, leads to sustainable growth.

3. Businesses and Social Responsibility

Modern businesses bear various responsibilities as members of society.

(a) CSR (Corporate Social Responsibility)

Businesses are responsible not only for making a profit but also for contributing to society, such as caring for the (**environment**) and supporting (**local communities**).

→ Fulfilling social responsibility enhances public trust in a company in the long term.

(b) Compliance

Following (**laws and social rules**). This is the foundation of all business activities. Without compliance, CSR cannot be achieved.

→ Violations or misconduct can seriously damage trust, so appropriate management systems are necessary.

(c) ESG

A concept that evaluates businesses not only by profit but also from the perspectives of Environmental, Social, and Governance.

→ While CSR refers to business actions, ESG is a standard used by (**investors**) and others to evaluate companies.

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Try

1. Answer the following questions.

(a) Explain the difference between limited liability and unlimited liability.

(b) Name four typical forms of business organization.

2. Answer the following questions.

(c) Explain what positive effects a company's generation of profit has on society.

(d) Explain what kinds of people and organizations stakeholders are.

3. Answer the following questions.

(e) Explain what kind of idea CSR is.

(f) Compliance is the idea that companies should follow what?

(g) According to ESG, who evaluates companies from the perspectives of environmental, social, and governance factors?

(h) A company can reduce costs by changing suppliers. However, the new supplier has problems with its labor practices and environmental initiatives. Answer the following questions.

(i) Identify the stakeholders who may benefit from this change and those who may be adversely affected.

(ii) From the perspective of CSR, explain the voluntary responsibilities that the company should consider.

(iii) Propose one action that the company should take and explain the reason for your proposal.

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Point!

1. Businesses Drive the Economy

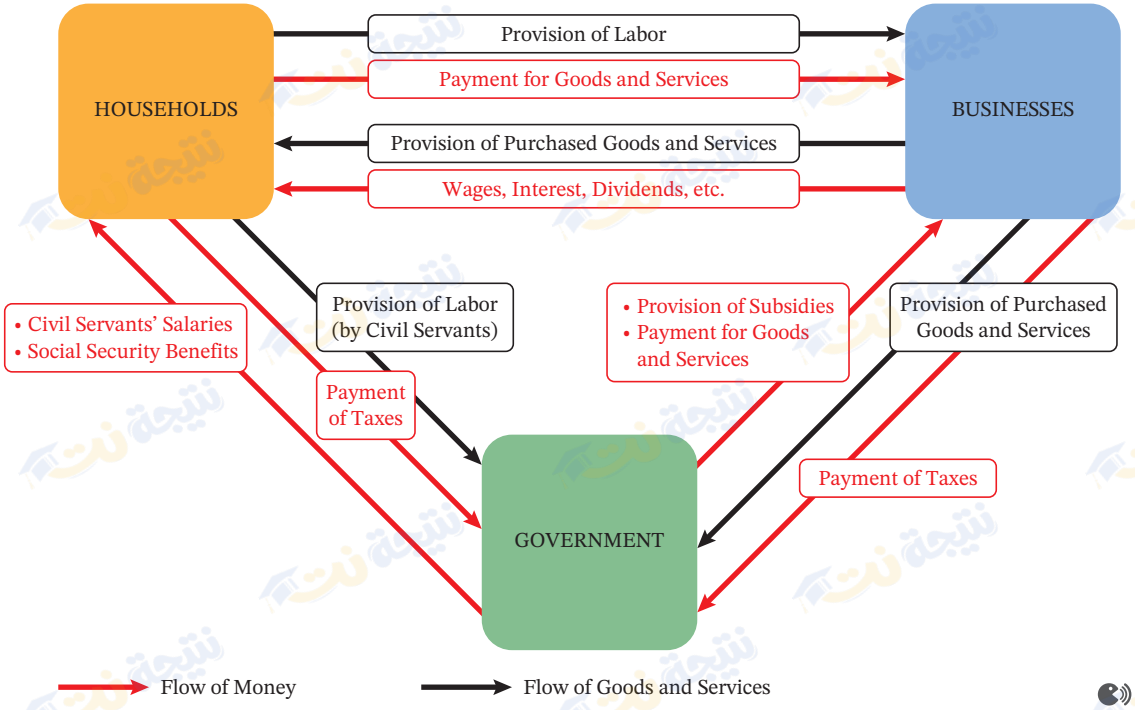
(a) Three Types of Economic Actors

(**Households**): Individuals and families that provide labor to earn income and consume goods and services.

(**Businesses**): Entities that use labor and other resources to produce and provide goods and services.

(**Government**): The entity that collects taxes and provides public services.

(**Economic Circulation**): The continuous flow of money, goods, services, and labor among the three economic actors.



(b) The Three Approaches to Measuring GDP

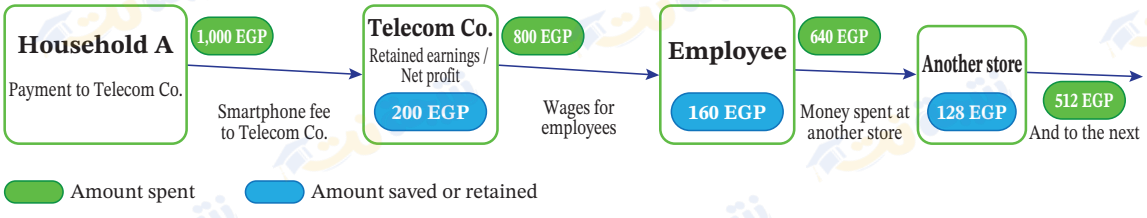
GDP can be measured using three approaches: the (**production approach**), the (**expenditure approach**), and the (**income approach**). In principle, the totals calculated using these three approaches are equal.

For example, suppose a business produces sneakers worth 1,500 EGP and households spend 1,500 EGP to purchase them. The business then distributes this 1,500 EGP as wages, profits, taxes, and other forms of income. Therefore, the totals for production, expenditure, and distribution are all equal to 1,500 EGP.

(c) (**Multiplier Effect**)

A phenomenon in which an increase in spending leads to a chain reaction of increases in income and spending, causing total income in the economy to rise by more than the initial increase in spending.

Example: Assume that each recipient spends 80% of the additional income received and saves or retains the remaining 20%.



The amounts spent in the first four rounds are 1,000 EGP, 800 EGP, 640 EGP, and 512 EGP, for a partial total of 2,952 EGP. The chain continues beyond the rounds shown.

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This is a simplified example, and the actual effect may be smaller or vary because of taxes, imports, debt repayments, capacity constraints, and price changes.

2. Supply Chain and Value Chain

(a) (**Supply Chain**) (Flow of Goods)

The series of processes through which goods move from the procurement of raw materials, through production, transportation, and sales, until they reach consumers.

(**International Division of Labor**): A system in which countries specialize in producing the goods and services in which they have an advantage in order to improve production efficiency.

(**Outsourcing**): The practice of delegating part of a business's operations to external companies in order to improve efficiency or reduce costs.

→ As international division of labor and outsourcing have advanced, today's supply chains have become complex and international networks.

(b) Value Added and Value Chain

At each stage of the supply chain, people add new value to a product. This is called (**Added Value**) and can be calculated as "selling price − purchase cost."

(**Value Chain**): A way of analyzing business activities that focuses not on the flow of goods but on the accumulation of added value at each stage.

Example in Egypt

Imported components

↓ Value added through processing and assembly

Processing and assembly in Egypt

↓ Value added through packaging, storage, and transportation

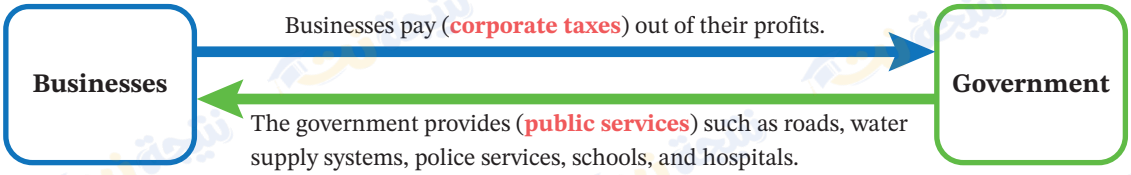
Transportation from an Egyptian port

↓ Value added through sales and distribution

Sale in Egypt or export to other countries

3. Interaction between Businesses, Government, and Society

(a) Two-Way Relationship Between Businesses and Government



Public services form the foundation of business activities while also supporting the lives of people throughout society.

(b) (**Foreign Direct Investment (FDI)**)

A form of investment in which a business expands overseas and conducts production or operations locally.

→ Businesses can achieve (**market expansion and cost reduction**), while host countries gain (**employment and technology**).

(c) (**Special Economic Zones**)

Designated areas established to support industry, logistics, and investment through infrastructure, administrative services, and specific regulatory frameworks.

→ They can attract businesses and promote the expansion of (**investment and employment**).

→ Business growth can increase employees' (**income**) and contribute to society through increased (**tax revenue**).

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Try

1. Answer the following questions.

   (a) Explain the three approaches used to measure GDP and the relationship among their totals.

   (b) Explain what kind of effect spending has according to the multiplier effect.

2. Answer the following questions.

   (c) Explain what a supply chain is.

   (d) Explain what a value chain is.

3. Answer the following questions.

   (e) What is FDI? Also explain what effects it is considered to produce.

   (f) Explain what effects establishing special economic zones is considered to have.

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Point!

1. Types and Sources of Income

(a) Nominal Wages and Real Wages

- (**Nominal Wages**): The actual amount of money received; it does not take changes in prices into account and shows only the face value.
- (**Real Wages**): The value of wages adjusted for inflation, showing their purchasing power—that is, what can actually be purchased with those wages.

→ Real wages increase when the percentage increase in nominal wages exceeds the percentage increase in prices.

Percentage increase = (new value − original value) ÷ original value × 100

(b) Various Forms of Income

We earn income in various ways in order to maintain our daily lives.

- (**Earned Income**): Income such as wages and salaries obtained through work. It is determined by working hours, skills, and other factors.
- (**Business Income**): Income obtained by running one's own business. It is the profit calculated by subtracting costs from sales and is likely to vary depending on performance.
- (**Asset Income**): Income obtained from owning assets such as deposits, stocks, and real estate.

For returns from financial products, it is necessary to check the financial terms and compliance with Sharia principles according to the contract.

- (**Remittances**)

Money sent from people working abroad to their home country. It affects not only households but also the overall economy through consumption and investment.

2. Structure of Expenditure

Understanding how expenditures are structured is essential for managing household finances.

(a) Fixed Costs and Variable Costs

- (**Fixed Costs**): Expenses such as rent, insurance, and monthly subscription fees that remain constant.
- (**Variable Costs**): Expenses such as food and entertainment that change depending on usage and lifestyle.

(b) Consumption and Savings

- (**Propensity to Consume**): The proportion of income that is spent on consumption.
- (**Propensity to Save**): The proportion of income that is saved.

→ In a simplified model, income available to households is divided between consumption and saving, so the propensity to consume and the propensity to save add up to 100%. Therefore, when one increases, the other decreases.

(c) (**Opportunity Cost**): The value of the next best alternative that is given up when a choice is made.

→ Considering opportunity cost is important for making better decisions with limited resources.

3. Connection between Households and the Economy

Household behavior has a significant impact on the overall economy.

(a) Consumption and Economic Activity

(**Disposable Income**): Money that remains after taxes and social insurance contributions (payments made to fund benefits such as healthcare and pensions) are deducted and can be freely used.

→ Households allocate disposable income among consumption, saving, debt repayments, and other expenses.

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When disposable income increases, consumption increases, leading to more sales and more active (**business production**).

Each household's consumption is small, but when the consumption of all households is added together, it forms an important component of GDP.

(b) (**Paradox of Thrift**)

For individual households, reducing consumption and allocating more income to savings is not necessarily a bad thing. However, if many households reduce consumption at the same time, overall demand in the economy may decline, causing income and production to fall.

(c) Role of Government

Governments support household consumption and business activities through spending and financial support, aiming to increase (**employment and income**).

(**Government Subsidies**): Financial support provided by the government to cover part of the cost of certain goods or services, allowing households to purchase them at lower prices.

Government subsidies are part of public spending and are financed not only by tax revenue but also by government borrowing and other public revenues.

Try

1. Answer the following questions.

(a) A household's monthly income increases from 10,000 EGP to 10,800 EGP, while the total cost of the essential goods it purchases each month rises from 8,000 EGP to 9,000 EGP. Answer the following questions.

(i) Calculate the percentage change in the household's income.

(ii) Calculate the percentage change in the total cost of the essential goods.

(iii) Based on your calculations, explain whether the household's purchasing power has improved or declined.

(iv) Propose one way the household could avoid reducing its spending on essential goods and explain why it would help.

(b) Explain what earned income is.

(c) Explain what business income is.

(d) Even if nominal wages, the amount of money actually received, rise, purchasing power may not rise. Explain why.

2. Answer the following questions.

(e) What kinds of expenses can be considered fixed household expenses? Give examples.

(f) What kinds of expenses can be considered variable household expenses? Give examples.

(g) Explain what it means to "consider opportunity cost."

3. Answer the following questions.

(h) A household decides to increase its savings because of uncertainty about prices. Explain one possible effect on the economy if many households make the same decision and reduce their spending at the same time.

(i) Explain what the government does to support household consumption and business activities.

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Point!

1. The Significance of Studying Familiar Companies

- We can understand that our economic activities are supported by familiar companies.
- We can understand what kind of value these companies provide to society and how they generate profits.

2. Three Perspectives for Analyzing a Company

(i) What does the company do?

What (**products or services**) does it offer? Who are (**its target customers**)?

(ii) How does it make profits?

How does it generate (**revenue**), and what is (**its cost structure**)?

(e.g., Pricing? Material costs? Labor costs? What other costs are incurred?)

(iii) How does it relate to society?

Contributions to the local community and corporate social responsibility (CSR).

(e.g., Environmental considerations? Promotion of female employment?)

3. Steps and Tools for Research

(i) Collecting Information (Research)

Use the following sources and methods effectively:

- Official company websites: Check business activities, philosophy, and product information.
- Other reliable sources: Use search engines to find reliable information from sources such as newspapers, government agencies, and industry organizations. Search using keywords such as "company name + business" or "company name + strengths."
- Interviews and company visits: If feasible, conduct an interview with a local shop or request a company visit.
  - When conducting an interview or company visit, obtain permission in advance and follow official procedures.
  - Do not collect personal or confidential information.
  - If an interview or company visit is not feasible, use the company's publicly available information and at least one reliable source not produced by the company.

→ Use multiple sources to verify the accuracy and reliability of information.

(ii) Analyzing Information

Consider the following questions:

- Why are its products or services chosen?
- What are (**the strengths**) of this company?

  (e.g., good value for money, wide availability, friendly customer service)
- What (**challenges**) might it face in the future?

  (e.g., Currency fluctuations, New competitors, Lack of digital tools)

→ It is important to think about "why."

(iii) Organizing Information

Sort the collected information into:

- Facts (objective information)
- Your opinions (evaluations and impressions)

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4. Presentation (Sharing in Class)

(i) Organizing Your Presentation

Structure your presentation as follows:

- Company overview
- Features of products/services } (**facts: objective information**)
- Strengths and challenges } (**your opinions: evaluations and impressions**)

(ii) Presentation Tips

- Summarize key points clearly and concisely.
- Use slides or materials if necessary.

(iii) Learning from Others

By listening to others' presentations, you can understand differences between companies and diverse perspectives.

→ Asking questions and exchanging opinions helps deepen learning.

Try

1. Preparing for the Research and Reviewing the Rubric

(a) Form Groups and Assign Roles

Divide the class into an even number of groups. All group members should work together on the research, analysis, presentation preparation, and peer evaluation.

Group name:

.....

Group members:

.....

Assign roles within the group, such as collecting information, keeping records, and preparing presentation materials.

Roles:

.....

.....

(b) Review the Rubric

Before beginning the research, review the following evaluation criteria with all group members. Keep these criteria in mind while working on "2. Research and Presentation Preparation" and "3. Presentation and Peer Evaluation."

Evaluation Criteria	What to Check	Points
Accuracy and relevance of sources	Does the group use the company's official information and at least one other reliable source to collect information relevant to the research?	4
Distinction between facts and opinions	Does the group distinguish between facts and data obtained from sources and the group's opinions?	3
Analysis of economic and social aspects	Does the group analyze economic aspects, such as how the company makes a profit and what costs it incurs, as well as how the company relates to society?	5
Use of evidence to support the conclusion	Does the group use specific facts and data to support its conclusion?	4
Clear presentation and recognition of limitations	Does the group present the key points clearly and explain what remained unclear after the research and what the group was careful about when using the information?	4
Total		**20**

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2. Research and Presentation Preparation

(a) Choose a Company

Discuss as a group and choose one familiar company to research.

Company name:

.....

The group's reason for choosing this company:

.....

.....

(b) Collect Information

Based on the roles assigned in your group, use the company's official information and at least one other reliable source. If possible, you may also conduct an interview or visit the company.

Collect information on the following:

(i) What the company does

(ii) How the company makes a profit

(iii) How the company relates to society

Source 1:

.....

What you learned from this source:

.....

.....

.....

Source 2:

.....

What you learned from this source:

.....

.....

.....

Share the information collected by the group, and use specific facts and data that can help you analyze the company as evidence.

(c) Analyze the Information

As a group, compare the facts and data obtained from multiple sources in **(b)**, and use them as evidence to form the group's opinion about the company. Be careful to distinguish facts from the group's opinion.

Consider the company's strengths, why its products or services are chosen, how it makes a profit and what costs it incurs, how it relates to society, and the challenges it may face in the future.

Consider not only what can be learned from the evidence, but also what remains unclear. Always pay attention to possible bias and limitations in the information.

The group's opinion based on the facts and data used as evidence:

.....

.....

.....

.....

.....

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What remained unclear after your research:

.....

.....

.....

Things you were careful about when using the information:
(e.g., Official company information may focus mainly on the company's positive aspects. The information may be outdated.)

.....

.....

.....

(d) Prepare the Presentation

As a group, organize your research findings and opinions and prepare your presentation. Choose one group representative to give the presentation. All group members should review the presentation and prepare to answer questions.

The group's conclusion:

.....

Evidence supporting the conclusion:

.....

Group representative:

.....

3. Presentation and Peer Evaluation

(a) Give the Presentation

Pair up with another group. A representative from each group presents the content prepared in "2. Research and Presentation Preparation" to the other group.

Include the following in the presentation:

(i) An overview of the company

(ii) Features of its products or services

(iii) How the company makes a profit

(iv) How the company relates to society

(v) The company's strengths and future challenges

(vi) The group's conclusion and the evidence supporting it

(vii) What remained unclear after the research and things the group was careful about when using the information

Present the key points clearly and concisely. Use slides or other materials if necessary. When questions are asked, all group members should work together to answer them.

(b) Evaluate the Other Group's Presentation

Listen to the other group's presentation and discuss it with your group members. Evaluate the presentation based on the rubric in Section 1. Complete one evaluation sheet as a group.

Name of the other group:

.....

Company researched:

.....

Score based on the rubric:

..... points out of 20

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Good points about the presentation:

Points that could be improved:

Questions or things you would like to know more about:

(c) Review the Group's Conclusion After Receiving Questions and Opinions

Discuss the questions and opinions received from the other group, and decide whether to maintain or change the group's conclusion.

Through the exchange of questions and opinions, deepen your understanding of differences among companies and diverse perspectives.

Questions and opinions received from the other group:

The group will:
Maintain the conclusion / Change the conclusion

Reason:

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Point!

1. What Is a Budget?

(**Budget**): Estimating income and expenditure in advance and deciding how to use money.

(a) Purpose and Effects of Budgeting

By understanding the balance between (**income and expenditure**), people can reduce unnecessary spending, creating room for (**savings and investment**).

→ It helps in planning for major future expenses (such as life events) and determining whether unexpected expenses are affordable.

→ It is not just about saving money, but serves as a guideline for deciding how to prioritize spending.

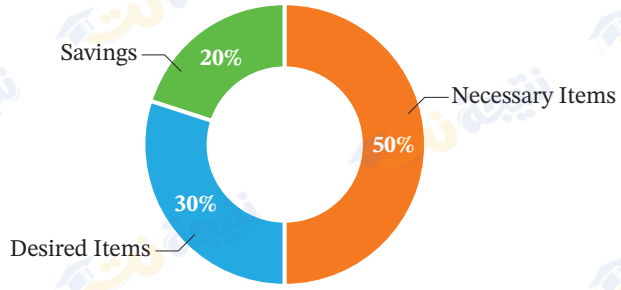
(b) (**Income and Expenditure Statement**): A table that lists expected income and expenditure to check the financial balance.

The balance is calculated as (**income − expenditure**). A positive balance is called (**Surplus**), and a negative balance is called (**Deficit**).

Income			Expenditure			
Item	Amount		Item	Amount		
Allowance	500 EGP		Food	200 EGP		
			Transportation	50 EGP		
			Others	150 EGP		Balance
Total	**500 EGP**	**−**	**Total**	**400 EGP**	**=**	**100 EGP**

(c) 50/30/20 Rule

A method of allocating income into "(**necessary items**) 50%," "(**desired items**) 30%," and "(**savings**) 20%."



→ It serves as a guideline to prevent imbalance in spending and achieve sustainable financial management.

However, this is only a general guideline, and the appropriate allocation should be adjusted flexibly according to each household's income and living circumstances.

2. Needs and Wants

Daily expenditures include both "necessary items" and "desired items." Distinguishing between them is the starting point of planned spending.

(a) Needs and Wants

- (**Needs**): Essential expenses required to maintain life (e.g., food and housing).
- (**Wants**): Expenses based on desires that enrich life (e.g., entertainment and hobbies).

→ However, this distinction cannot be made solely on the basis of the item, and the same thing may be either a need or a want depending on the circumstances.

For example, shoes needed for daily life may be a need, whereas buying the latest brand-name shoes when you already have a pair that is still perfectly wearable may be a want.

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(b) Mandatory and Discretionary Spending

- (**Mandatory Spending**): Essential expenses corresponding to needs.

  However, as noted above, the distinction between needs and wants is not absolute and varies depending on the circumstances. Therefore, it is not always possible to say definitively what counts as mandatory spending.

- (**Discretionary Spending**): Expenses that can be adjusted based on individual judgment, corresponding to wants.

  The first step in reviewing a budget is to examine discretionary spending.

→ Decisions about needs and wants determine household spending and create (**market demand**). For companies, it is important to understand these needs and wants accurately.

3. Allocation of Limited Resources

Because a household's financial resources are limited, many factors must be considered to include savings in a budget.

The following are general guidelines for saving, mainly intended for managing household finances in adulthood.

They should not be applied directly to high school students and may change depending on social conditions and individual circumstances. However, it is important to understand their basic principles as knowledge for the future.

(a) (**Financial Goal**): A target amount and savings plan set to achieve something you want to do.

Divide your goals into short-term (about 1–3 years), medium-term (about 3–10 years), and long-term (about 10 years or more), depending on when you want to achieve them and how big they are.

(b) Prerequisites for Saving

(**Trade-off**): A relationship in which obtaining one thing requires giving up another.

For example, if you want to save money, you must give up buying something today.

(**Opportunity Cost**): The value of what is given up when making a choice.

→ When two desires are in a trade-off relationship, it is rational to consider their opportunity costs and choose the option that provides the greatest satisfaction.

(c) (**Emergency Funds**): Funds set aside in advance without a specific planned expense, to prepare for unexpected events such as illness or unemployment.

(d) Saving Priorities and Guidelines

- The 20% allocated for savings in the 50/30/20 Rule can be divided into two parts: savings for goals and an emergency fund.
- As a general rule, savings for goals should prioritize (**goals with the earliest deadlines**).
- The target for an emergency fund is to secure (**3–6 months of living expenses**).

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Try

1. Answer the following questions.

(a) Explain what benefits can be gained from making a budget.

(b) Explain what the 50/30/20 rule is.

(c) Explain the benefits and limitations of the 50/30/20 rule.

2. Answer the following questions.

(d) Explain what needs are.

(e) Explain what wants are.

(f) For each of the following expenses, determine whether it is a need or a want, and whether it is mandatory or discretionary spending. Explain your reasoning based on its purpose, the availability of alternatives, urgency, and affordability.

A: A basic mobile data plan needed for study.

B: Transportation costs for visiting a medical institution.

C: A meal purchased outside because there is no food at home.

3. Answer the following questions.

(g) Explain what kind of relationship between two things a trade-off refers to.

(h) Answer the following questions about the budget below.

Monthly amount available: 1,200 EGP

Transportation: 500 EGP

Learning materials: 250 EGP

Mobile data: 180 EGP

Lunch on school days: 220 EGP

Savings goal: 150 EGP

(i) Identify the problem with this budget.

(ii) What information should be checked before changing the budget?

(iii) Revise the budget so that necessary expenses are covered while maintaining a realistic amount of savings.

(iv) Explain the trade-off involved in your revision.

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Point!

1. Why Do People Save Money?

(**Savings**): Setting aside part of one's income for future use according to one's goals and needs instead of spending it immediately.

Because a person's goals and needs change according to their life stage, the amount they need to save and the time required to do so also vary.

For students, saving goals may include transportation costs, learning materials, hobbies, and extracurricular activities. In later stages of life, goals often include higher education, housing, family responsibilities, preparing for risks, and retirement.

(a) Types of Savings by Purpose

(i) (**Goal Funds**): Money saved for future purposes such as buying a house, education costs, or travel.

The timing of their use may range from a few months to several years or even more than ten years in the future.

→ Clearly deciding "what you are saving for" makes it easier to save money in a planned way.

(ii) (**Emergency Funds**): Money prepared for unexpected events such as illness, accidents, or unemployment.

The timing of their use is not fixed because it is intended for emergencies.

→ They help people maintain a stable life even when sudden expenses occur.

(iii) (**Retirement Funds**): Money set aside for retirement, when income from work usually decreases.

The timing of their use is expected to be several decades in the future.

→ When considering a long life, it is important to begin preparing for retirement at an early stage.

(b) The Difference Between Saving and Investing

In addition to saving, investing is another way to prepare financially for the future.

(i) (**Cash Savings**): Simply keeping money for future use. Besides holding cash, people can also keep money as (**deposits**) in banks or other financial institutions.

Deposits offer a high level of (**safety**) and can be withdrawn easily when needed, but it is generally difficult to (**greatly increase**) the amount of money.

(ii) (**Investment**): Investing money in companies or business activities with the expectation of future profits.

Although investments may increase assets, there is also a risk of (**losses**) caused by price changes.

For future security, it is important to combine these methods according to one's own (**life plan**) while considering safety, profitability, and timing.

2. How Interest Is Calculated

(**Interest Rate**): The percentage used to calculate interest on money over one year.

Riba, the practice of lending money and receiving interest, is prohibited under Islamic law (Sharia). Therefore, Islamic finance has developed alternative mechanisms that provide similar economic functions without using interest-bearing loans.

(a) There are two major ways of calculating interest: simple interest and compound interest. These methods can create large differences in future assets.

The following examples illustrate mathematical growth based on an assumed constant interest rate and do not recommend any specific financial product.

(i) (**Simple Interest**): A system in which interest is calculated only on the principal, or the original amount of money.

(ii) (**Compound Interest**): A system in which interest is calculated on the principal and previously earned interest.

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How the Same 1,000 EGP Grows Under Simple and Compound Interest

	Initial Amount	After 5 Years	After 10 Years	After 15 Years	Increase Over 15 Years	Percentage Increase Over 15 Years
Simple Interest	1,000	1,250	1,500	1,750	750	75%
Compound Interest	1,000	1,276	1,629	2,079	1,079	108%
Difference	0	26	129	329	–	–

Note: These figures assume a constant annual interest rate of 5%. The compound interest figures are rounded to the nearest whole number.

- Under simple interest, the amount gained each year remains constant at 50 EGP. Under compound interest, however, the amount gained each year gradually increases.
- As a result, there is a significant difference in the Percentage Increase (Increase Over 15 Years ÷ Initial Amount × 100) after 15 years.

(b) The Rule of 72

By calculating (**72 ÷ interest rate (%)**), people can estimate how many years it will take for their assets to double.

This is only an estimate based on an assumed constant interest rate. Actual investment returns are uncertain and may be lower than the assumed rate or even negative.

3. Preparing for Future Risks

(a) Risk and Risk Sharing

(**Risk**): An event that may or may not occur, but would have a significant impact if it does. Examples include health problems, accidents, natural disasters, and unemployment.

(**Risk Sharing**): The idea of reducing each person's burden by sharing risks that are too large for one person to bear among many people.

(b) The System of Insurance

Insurance is a system in which (**premiums or contributions**) collected from many people are pooled to provide (**financial compensation**) to those who suffer losses due to risks specified in advance.

(i) (**Public Insurance**): Insurance provided through public systems. Depending on the country or region, people who meet certain conditions may be required to enroll.

Representative examples of public insurance include health insurance, pension insurance, disability insurance, work injury insurance, and unemployment insurance.

(ii) (**Private Insurance**): Insurance provided by private insurance companies, which individuals generally choose to enroll in according to their needs.

The roles and specific systems of public and private insurance vary by country and region.

(c) Three Types of Risk Sharing and Takaful

There are three layers of protection against risk: self-help, mutual help, and public help. It is important to prepare for risks by combining these three approaches.

(**Self-Help**): Saving and preparing resources by yourself, such as maintaining an emergency fund.

(**Mutual Help**): A system in which members contribute small amounts of money and support other members who experience misfortunes. Private insurance, which people choose to join voluntarily, is an example of mutual help.

(**Public Help**): Support provided by the government or local authorities to help people in need through society as a whole. Public insurance, which is funded by taxes and social insurance contributions, is an example of public help.

"Self-help," "mutual help," and "public help" are conceptual categories for understanding ways of preparing for risks. In practice, multiple approaches may be combined depending on the circumstances of each country or region, and the boundaries between them may not always be clear.

(**Takaful**): An Islamic mutual-help system in which participants contribute to a common fund to support participants who face specific risks. It is an example of mutual help.

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Try

1. Answer the following questions.

   (a) Explain what goal funds are.

   (b) Explain what emergency funds are.

   (c) Explain how saving money in a bank and investing in stocks differ in terms of safety and profitability.

   (d) If an unexpected school-related expense must be paid within a few days, what characteristic should be given the highest priority when choosing a financial method? Explain why.

   (e) Explain why a single financial method cannot meet every financial goal.

2. Answer the following questions.

   (f) Explain how interest is calculated differently under simple interest and compound interest.

   (g) Assuming a constant annual interest rate of 3%, use the Rule of 72 to estimate how many years it would take for an amount of money to double.

3. Answer the following questions.

   (h) A household wants to prepare for the financial impact of a specific risk. Which financial method is mainly intended to provide protection?

   (i) Explain the differences among the three types of risk sharing.

   (j) Explain what kind of system takaful is.

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Point!

1. What Is a Contract?

(a) (**Contract**): An agreement between parties that has legal binding force. Contracts are entered into when people purchase products or use services.

- A contract is generally formed when one party makes an (**offer**) and the other party gives (**acceptance**).
- As a general principle, a valid contract requires the parties to have the legal capacity to enter into it, genuine consent, a lawful purpose, and sufficiently clear terms.
- (**Minors**) have limited capacity to enter into financial contracts and may need the consent of a parent, guardian, or other legal representative.
- Specific rules regarding contract formation, validity, and minors' contractual capacity vary depending on the type of contract and the laws of each country or region.

(b) Oral Contracts and Written Contracts

- (**Oral Contract**): A contract made through spoken agreement.

  In fact, everyday purchases made orally without a written document are also contracts. Such contracts are generally valid, but some types of contracts must be made in writing or meet other legal requirements.

- (**Written Contract**): A contract made by creating a written document that records its contents.

  It is easier to confirm and prove the contents later.

  → Important contracts are often made in writing to prevent trouble.

(c) Claim and Obligation

(**A claim**) is the right to receive something from another person, while (**an obligation**) is the duty to do something for another person.

When a contract is formed, both the buyer and the seller obtain claims and obligations. The buyer has the obligation to pay and the claim to receive the product. The seller has the claim to receive payment and the obligation to deliver the product.

(d) Freedom of Contract and Responsibility

(**Principle of freedom of contract**): Contracts are made based on the free will of the parties.

Once a contract is formed, one party generally cannot cancel it unilaterally. However, under the laws of the relevant country or region, cancellation may be permitted or the contract may be declared invalid in certain cases, such as those involving (**fraud**) or (**illegal terms**).

→ It is important to check the contents carefully before agreeing to a contract.

2. The Credit System

High school students may not be eligible to use credit transactions such as credit cards because of age or other requirements. However, they should understand how credit works in advance to prepare for adult life and managing household finances.

Since the specific structure of credit systems and eligibility requirements vary by country or region, this section covers only general basic knowledge.

(a) Credit and Sales Credit

(**Credit**): Being trusted to make payments or repayments properly in the future.

(**Credit Transaction**): A transaction in which payment is made later based on that trust.

(**Sales Credit**): A type of credit transaction used in credit card payments, in which a credit company pays the seller on behalf of the consumer, allowing the consumer to pay later. The following are common payment methods.

(**Lump-Sum Payment**): A method of paying the full amount at one time. No additional charges are incurred.

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(**Installment Payment**): A method of paying the amount in multiple payments. Additional charges are incurred depending on the payment period.

(**Revolving Payment**): A method of paying a fixed amount each month. The repayment period tends to become longer, and the additional charges can become large.

(b) Credit Information (Credit Score) and Self-Management

(**Credit Bureau**): An organization that collects and manages information about individuals' credit obligations and repayment histories under the country's legal framework.

(**Credit Score**): A numerical estimate of an individual's credit risk based on available credit information.

Financial institutions may use a credit score together with other information when deciding whether a person can use products such as credit cards or loans. Therefore, eligibility is not determined by the credit score alone.

→ Repeated late payments may lower a person's credit score and make it more difficult to get a credit card or take out a loan. Credit transactions are convenient, but people must be careful not to overuse them or fall into multiple debts.

3. Debt, Responsibility, and Consumer Rights

(a) Measures Against Financial Fraud

- (**Financial Fraud**): A scam in which criminals deceive people about investments, loans, transfers, or other financial transactions in order to steal money.

→ Even if you are told things like "You are guaranteed to make money" or "This offer is only available now," do not make a decision on the spot; refuse the offer clearly. If you become involved, consult a trusted person or organization as soon as possible.

- (**Phishing Scam**): A scam in which criminals pretend to be financial institutions or other trusted organizations and use fake websites, messages, phone calls, QR codes, or apps to steal personal information, bank account information, passwords, or money.

→ To protect yourself from phishing scams, take the following precautions.

- Never share your PIN, password, or one-time password (OTP) with anyone.
- Do not install apps or share your screen when asked by an unknown person.
- Do not use suspicious links or QR codes. Contact the institution only through its official app, official website, or published phone number.
- If fraud is suspected, immediately block the card or wallet if necessary, report the incident, and preserve messages and transaction records as evidence.

(b) Consumer Protection Systems

(**Consumer Protection**): A set of rules and systems designed to protect consumers from unfair contracts and transactions. These rules and systems exist because consumers are generally in a weaker position than businesses in terms of information and bargaining power.

Consumers' rights and procedures regarding contract cancellation are determined by the laws and systems of each country or region and vary depending on the type of product or service and the terms of the contract.

→ Consumers should know their rights and consumer protection systems in order to protect themselves.

- Check the consumer protection laws and systems in your country and the available channels for advice and complaints.
- For financial services, first use the service provider's official complaint channel and, if necessary, consult the relevant financial regulatory authority.
- For non-financial products and services, contact the seller through its official contact point or consult the relevant consumer protection authority.
- Keep relevant records, such as contracts, receipts, advertisements, communications, and complaint reference numbers.

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(c) Default and Responsibility for Debt

(**Default**): Failure to fulfill a debt obligation or repay its installments in accordance with the agreed terms and deadlines.

If a person cannot repay a debt, additional costs such as interest and fees may cause the debt to grow. This can lead to a vicious cycle of borrowing more money to repay existing debts, known as (**Multiple Debts**), and may also damage the person's credit.

→ Borrowing money is not necessarily a bad thing. However, it is unwise to borrow money to buy something when there is no realistic plan for repayment. Debt should be used only for clear purposes and when there is a reasonable repayment plan, while taking into consideration whether the transaction complies with Islamic Sharia principles.

Try

1. Answer the following questions.

(a) What are the two forms a contract can take based on how it is made?

(b) Explain what the principle of freedom of contract is and give one thing that should be checked before entering into a contract.

2. Answer the following questions.

(c) Using a credit card payment as an example, explain how sales credit generally works.

(d) Explain what a credit score is and how repeated late payments may affect it.

3. Answer the following questions.

(e) Explain what default is and how it may lead to multiple debts.

(f) Read the following message.

"Send us your one-time password (OTP) now, or your account will be closed."

Identify three warning signs indicating that this message may be a scam.

(g) Read the following advertisement.

"Get this product today—only EGP 500 per month!"

(i) Identify wording that could mislead customers and list three important contract terms missing from the advertisement.

(ii) Write three questions that a customer should ask the seller before entering into the contract.

(iii) If the seller refuses to provide all the contract terms, state the safest next step.

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Point!

1. Budgets and Income and Expenditure Statements

(**Budget**): Estimating income and expenditure in advance and deciding how to use money.

→ By using money in a planned way, people can reduce unnecessary expenditure, making it easier to save money for the future.

(**Income and Expenditure Statement**): A table that lists expected income and expenditure to check the financial balance.

- It makes it easier to determine whether the budget is (**a realistic plan**).
- By comparing it with (**the actual balance**) later, it serves as a reference for setting the budget for the next period.

2. Managing Income with Spreadsheet Software

Let's create your own "Income and Expenditure Statement" using (**spreadsheet software**) and manage your monthly balance.

If spreadsheet software is not available, print out **the Paper-Based Spreadsheet Template** on page 40 and perform the calculations with a calculator. Also, read and follow the **Privacy Note** below.

Privacy Note

- If you do not wish to enter exact amounts, you may use rounded or hypothetical figures.
- If you use actual information, use only information about your own allowance, income, and expenditure.
- Do not enter information about your family's income or household finances.
- Do not enter sensitive information, such as bank account numbers, card numbers, or passwords.
- Unless necessary for learning purposes, such as review by the teacher, do not share the data you create with others.
- After completing the activity, if you no longer need the data, delete the file or dispose of the paper.

(a) Organizing Income

Set categories and enter the income earned from each item.

The total income can be calculated automatically by using the (**SUM function**).

	A	B
1	Income	
2	Item	Amount (EGP)
3	Monthly allowance	800
4	Helping at home	400
5	Gift money	200
6	Total	1,400

This cell contains the function (**=SUM(B3:B5)**).

Note: The items and amounts in this table are examples.

(b) Advantages of Using Spreadsheet Software

- It can reduce calculation mistakes.
- When numbers are changed, totals are updated automatically.

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3. Classifying Expenditure and Thinking About Balance

(a) Organizing Expenditure into Needs and Wants

- (**Needs**): Essential expenses required to maintain life.
- (**Wants**): Expenses based on desires that enrich life.

Set categories for both needs and wants and enter the cost of each item.

The total expenditure can be calculated using the SUM function, and the balance can be calculated by (**income − expenditure**).

	C	D	E
1	Expenditure		
2	Item	Type	Amount (EGP)
3	Transportation	Needs	300
4	School Supplies	Needs	220
5	Snacks	Wants	400
6	Games	Wants	250
7	Total	-	1,170
8			
9	Income	Expenditure	Balance
10	1,400	1,170	230

- This cell contains the function (**=B6**).
- This cell contains the function (**=E7**).
- This cell contains the function (**=C10 − D10**).

(b) Adjusting the Balance

- If the balance is positive (**Surplus**), money can be used for additional spending or (**savings**).
- If the balance is negative (**Deficit**), it is necessary to review the budget, including the income and expenditure estimates, and consider appropriate adjustments to improve the balance.

4. Reviewing the Budget at the End of the Month and Preparing for the Future

(a) Reviewing the Actual Balance

At the end of the month, record the actual income and expenditure and compare them with the budget.

- Were there any items that cost more than expected?
- Were there any wants that could have been reduced?
- Is it possible to increase savings for next month?

(b) Trade-offs and Decision-Making

(**Trade-off**): A relationship in which obtaining one thing requires giving up another.

Because money is limited, it is impossible to satisfy all wants. It is important to clarify the priorities of your wants and make conscious decisions.

→ Continuing to review the records and make improvements leads to better planned money management.

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Try

Before starting this activity, review and follow the Privacy Note on page 37.

(a) Organize Your Income for This Month

(i) Enter possible sources of income into spreadsheet software.

(ii) Enter the amount of income earned from each item.

(iii) Use the SUM function to calculate the total.

(b) Organize Your Expenditure for This Month

(i) Enter possible needs into spreadsheet software.

(ii) Enter possible wants into spreadsheet software.

(iii) Enter the expected cost for each item.

(iv) Use the SUM function to calculate the total.

(v) Calculate your balance.

(vi) If the balance is negative, review the budget and make appropriate adjustments to improve the balance. Possible adjustments include:

- Check whether there are any errors in the amounts or calculations.
- Review whether the income and expenditure estimates are realistic.
- Ensure that expenses for Needs are covered while reducing flexible spending or postponing goals.
- Consider only legal, safe, and age-appropriate ways to increase income or seek support.

(c) Review This Month's Budget at the End of the Month

(i) Record the actual income and expenditure for each item alongside the budgeted amounts, calculate the actual balance, and organize them in your income and expenditure statement.

(ii) Compare the budgeted balance with the actual balance.

(iii) Consider which spending decisions could have been improved while taking trade-offs into account.

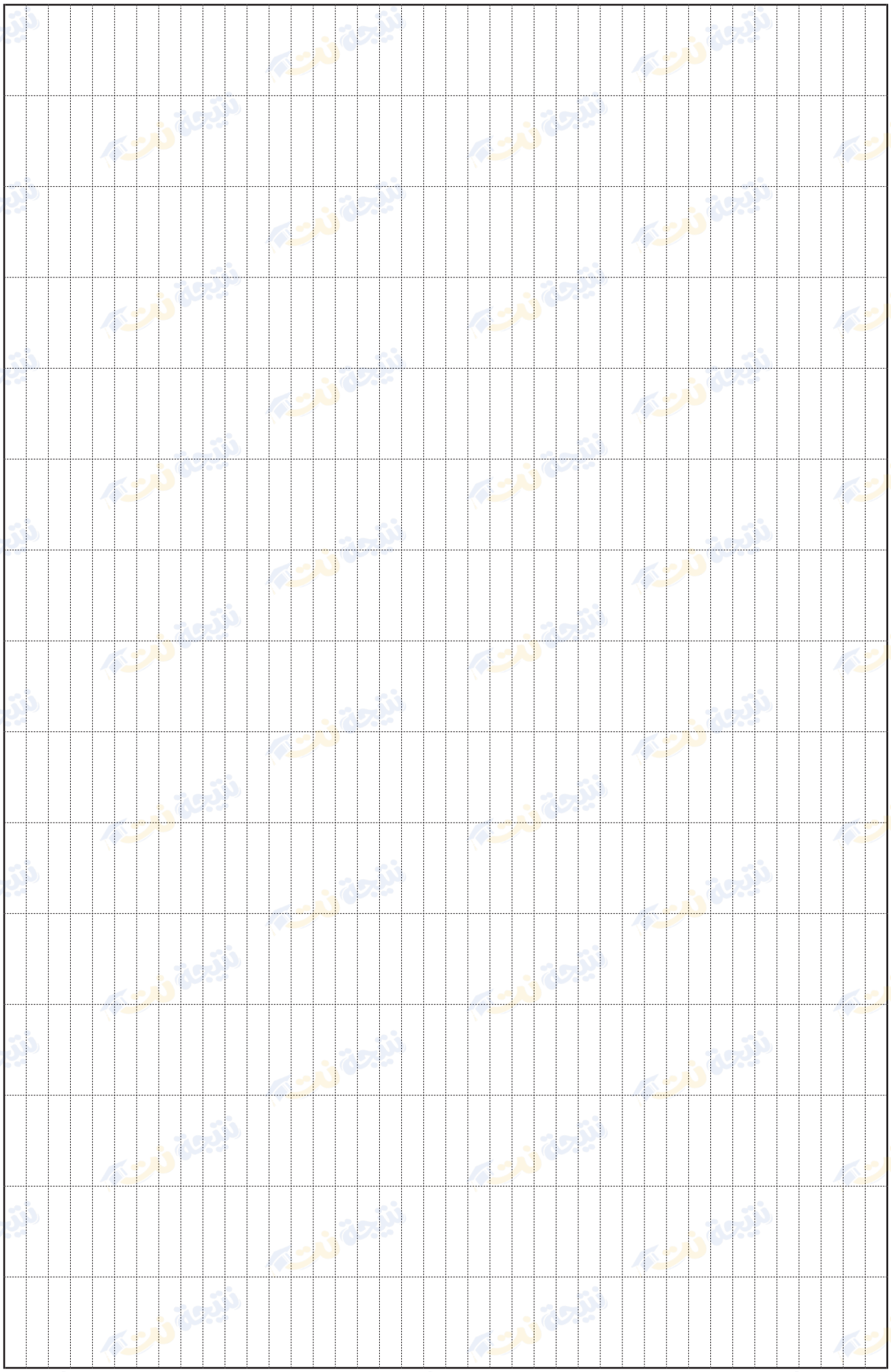
(d) Challenge: Create a Graph

(i) Using the data in your income and expenditure statement, compare the budgeted and actual expenditure for each category.

(ii) Create a simple graph showing the results using spreadsheet software or by drawing it on paper.

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Paper-Based Spreadsheet Template



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What Is Entrepreneurship?

Point!

1. What Is Entrepreneurship?

(a) Starting a Business and Entrepreneurship

Today, people who can turn ideas into businesses are increasingly needed around the world, and Egypt is no exception. Putting new ideas into action can create jobs and help solve problems in local communities. This is one of the reasons why entrepreneurship is attracting attention.

(**Starting a Business**): Creating a new business. A person who starts a business to create new value is called an entrepreneur.

(**Entrepreneurship**): A mindset of taking initiative and continuously seeking new ways to create value.

- It does not simply mean starting a business. It is also required for people who promote new ideas and activities within existing organizations.
- It is valued in modern society as a force that creates new value and solves social problems.

Types of Business

(**Startup**): A company that has a strong entrepreneurial mindset and aims for rapid growth by using new technologies and business models.

(**Small Business**): A business that aims to operate steadily over a long period without seeking rapid expansion.

(**Social Enterprise**): A business that aims to solve social problems, with profit regarded as a means to achieve that goal.

(b) Innovation and Risk-taking

(**Innovation**): Creating new value not only through new products, but also through new methods and systems, thereby bringing major changes to society and markets.

For example, the development of ICT (**Information and Communication Technology**) has greatly changed our lives. In today's rapidly changing society, the ability to create new value is required in many different fields.

(**Risk-taking**): Properly judging the risks involved in new businesses and ideas and making decisions and taking action to pursue them while confirming feasibility and staying within a reasonable level of risk.

2. From Ideas to Business

(a) Clarifying a Value Proposition

(**Value Proposition**): Clearly communicating, in words that customers can understand instantly, what kind of value a business provides.

- The purpose is to communicate who you want to help, what problems they face, and how your strengths can help solve those problems.
- The more specific the value proposition is, the more attractive the business becomes to customers.

(b) Confirming Ideas through Market Research

(**Market Research**): Activities that objectively investigate customer needs, competitors, and market size before creating a product or launching a service.

No matter how excellent an idea may be, it cannot succeed as a business without market (**demand**). It is important to correctly understand customers' problems through surveys, interviews, and analysis of existing data.

(c) Verification through MVP

(**Minimum Viable Product (MVP)**): A product or service that has only the minimum features needed to test customer reactions at an early stage and is improved based on those reactions.

Instead of trying to create a perfect product from the beginning, this method focuses on improving products by incorporating the opinions of actual users.

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It makes it possible to reduce (**development costs and time**) while efficiently creating products that meet customer needs.

→ An idea can be gradually developed into a real business by following the steps of value creation, value proposition, market research, and MVP testing.

3. Risks and Social Significance of Entrepreneurship

(a) What Is Needed for Starting a Business and Its Risks?

Creating new value through entrepreneurship can benefit both entrepreneurs and society, but it also involves various risks. The following are some typical examples.

(**Capital**)…Before a business becomes stable, a company may face a shortage of funds if it does not have sufficient capital to cover its expenses.

(**Market knowledge**)…If this is insufficient, products and services may not match market needs.

(**Competitors**)…If other companies provide the same products or services, customers may choose them instead.

These risks can be reduced by estimating the capital required and preparing a financial plan, understanding customer needs through market research, and analyzing competitors to clarify the company's strengths.

(b) Entrepreneurship Ecosystems and the Social Significance of Starting a Business

(**Entrepreneurship Ecosystem**): An environment in which various actors cooperate to support entrepreneurship.

The actors that make up an entrepreneurship ecosystem can be grouped into the following types, each of which plays a different role. In Egypt as well, various actors suited to its institutions and environment perform these roles and contribute to the formation of the entrepreneurship ecosystem.

- (**Regulatory Authorities**): Establish and enforce the rules that apply to businesses.
- (**MSME Support Agencies**): Provide support, services, and programs for Micro, Small, and Medium-sized Enterprises.
- (**Incubators**): Support the development of business ideas and their testing at an early stage.
- (**Banks and Financial Institutions**): May provide financial services under the necessary authorization.
- (**Investors**): Provide capital and take on risks in exchange for agreed rights.
- (**Universities**): May provide knowledge, research, mentoring, facilities, and other forms of support.

These actors support entrepreneurship in different ways, including financing, training, incubation, and the administration of licenses and permits.

Social Significance of Entrepreneurship: Entrepreneurship is supported by the entrepreneurship ecosystem and, in turn, contributes positively to society and local communities.

- Starting a business creates (**new employment opportunities**) in local communities.
- New businesses generate more (**innovation**), increasing the chances for it to spread throughout society.
- Products and services created by new businesses may help solve problems faced by local communities.

→ A business idea can be gradually developed by identifying a customer problem, clarifying the value it can offer, conducting market research, using methods such as an MVP to gather feedback, and making improvements.

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Try

1. Answer the following questions.

   (a) Explain what kind of mindset entrepreneurship refers to.

   (b) Explain what a startup is.

   (c) Explain what innovation is.

2. Answer the following questions.

   (d) Explain why market research is important when developing an idea into a real business.

   (e) Explain what a Minimum Viable Product (MVP) is and what benefits it has.

3. Answer the following questions.

   (f) Identify one risk involved in starting a business and explain a practical measure that can be taken to reduce it.

   (g) Explain what an entrepreneurship ecosystem is, choose one type of actor within it, and explain the role that actor plays.

   (h) If you were to start a business, which actors in the entrepreneurship ecosystem do you think you would need support from, and what kind of support would you need? Give two such combinations and explain your reasons.

   (i) Explain the social significance of entrepreneurship.

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Point!

1. What Is a Business Model?

(**Business Model**): A system that shows who a company's customers are, what value it provides, how it delivers that value, and how it earns revenue. Clarifying a business model makes it easier to understand the overall structure, strengths, and challenges of the business.

One of the main methods for organizing a business model is the Business Model Canvas, which examines it from nine perspectives. In this chapter, we consider a business model from the following six perspectives to make it easier to understand.

- (**Customer**): Whose problems does the business aim to solve, and what kind of problems are they?
- (**Value Proposition**): What kind of value does the business provide to customers?
- (**Delivery**): How does the business deliver its products or services to customers?
- (**Revenue**): Who pays the business, how much do they pay, and how often?
- (**Costs and Resources**): What expenses and resources does the business require?
- (**Key Risks and Evidence**): What risks does the business face, and which of them should be examined? What is the basis for that judgment?

2. Representative Business Model Patterns

Business models can take various forms depending on how the six perspectives are combined. The following are representative models in which particular perspectives are especially prominent.

- (**One-time Purchase Model**): A model in which customers make a single payment each time they receive a product or service, and the transaction ends at that point.

  It is characterized by the method used to generate revenue.
- (**Subscription Model**): A model in which customers make regular payments to continue using a service.

  It is characterized by the frequency with which revenue is generated.
- (**Freemium Model**): A model in which basic services are provided free of charge while fees are charged for additional features.

  It is characterized by the method used to generate revenue.
- (**Advertising Model**): A model in which a company provides a free service to attract many users and receives advertising fees from advertisers who want to promote their products or services.

  It is characterized by generating revenue from advertisers rather than from the users of the service.
- (**Platform**): A model that provides a "place" connecting users, such as sellers and buyers.

  It is characterized by how value is delivered.
- (**Franchise**): A model in which a company grants other parties the right to use its business system and brand, receives fees in return, and expands its business to multiple locations.

  It is characterized by delivering products and services to customers in different regions through franchisees.

3. Designing Revenue Structures

To continue a business over the long term, it is necessary to understand its revenue structure, that is, how it makes money.

(a) Comparison and Selection of Revenue Models

Among the models introduced in Section 2, the one-time purchase model and the subscription model are characterized by how they generate revenue. Other revenue models include the usage-based pricing model and the commission model.

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A business needs to select an appropriate revenue model according to factors such as the products or services it provides and how customers use them. When doing so, it is important to consider the advantages and risks of each model.

- One-time Purchase Model: Customers make a one-time payment each time they receive a product or service, and the transaction is completed at that point.
  - Advantage: The transaction structure is (**simple**).
  - Risk: Revenue (**fluctuates**) depending on the number of transactions completed.
- Subscription Model: Customers make regular payments to continue using a service.
  - Advantage: Revenue is (**easier to predict**) as long as customers continue using the service.
  - Risk: The service must be provided continuously, and customer (**cancellations**) may lead to a decrease in revenue.
- Usage-based Pricing Model: Customers pay an amount based on their (**usage**) of the service.
  - Advantage: Customers pay according to how much they use the service.
  - Risk: The business's revenue fluctuates depending on customers' usage.
- Commission Model: A (**platform operator**) or (**intermediary**) receives a fixed fee or percentage for each transaction.
  - Advantage: Revenue is directly linked to completed transactions.
  - Risk: Revenue depends on transaction volume.

(b) Pricing

The prices of products and services are decided based on factors such as (**customers' perceived value**) and (**differentiation from competitors**).

→ The gross profit per unit is determined by "selling price − the cost of one product," but if a company does not set its price while considering these factors, customers may not buy it in the first place.

(c) Customer Acquisition Cost and Estimated Customer Value

- (**CAC (Customer Acquisition Cost)**): The amount calculated by dividing the total expenditure incurred to acquire new customers by the number of new customers acquired.

  Customer Acquisition Cost (CAC) = Total expenditure for (**customer acquisition**) ÷ (**number of new customers**)

  Example: If 1,200 EGP is spent on acquiring new customers and 40 new customers are acquired, CAC is calculated as follows:

  1,200 EGP ÷ 40 customers = 30 EGP per customer

(**Estimated Customer Value**): The total profit expected to be generated from one customer.

The average profit per purchase is calculated by subtracting the direct cost of providing the product or service from the revenue generated by one purchase.

Estimated Customer Value = (**Average Profit per Purchase**) × (**Expected Number of Purchases**)

Example: If the average profit per purchase is 50 EGP and one customer is expected to make four purchases, the estimated customer value is calculated as follows:

50 EGP × 4 purchases = 200 EGP per customer

The assumptions used in the calculation, such as the expected number of purchases, must be clearly stated. The result is an estimate and does not guarantee the amount of profit that will actually be generated.

→ If the estimated customer value exceeds CAC, the profit expected to be generated from one customer may exceed the cost of acquiring that customer. However, the estimated customer value is based on assumptions and does not guarantee the sustainability of the business.

(d) (**Scalability**): A concept that describes how the costs and operations required by a business change as the scale of its activities expands.

Handmade food stalls and face-to-face services generally require additional materials and working time as the number of customers increases.

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In contrast, apps and digital content may be able to serve more customers with relatively small increases in additional costs and effort.

Scalability does not determine whether a business is socially valuable or financially sustainable.

Try

1. Answer the following questions.

(a) Explain what a business model is.

(b) List all six perspectives used in this chapter to consider a business model and explain each one.

2. Answer the following questions.

(c) Explain how the subscription model and the freemium model work.

(d) Explain how a platform and a franchise work.

(e) For each of the following services, select the revenue model that you think is most appropriate from among the one-time purchase model, subscription model, usage-based pricing model, and commission model, and explain the reason for your choice. When making your selection, consider the advantages and risks of each model.

A A one-time bicycle repair

B Monthly access to learning materials and practice exercises

C A marketplace that connects local producers with buyers

3. Answer the following questions.

(f) A company spent 1,500 EGP to acquire new customers and acquired 50 new customers. Calculate the company's Customer Acquisition Cost (CAC).

(g) A business has an average profit of 60 EGP per purchase and expects each customer to make five purchases. Calculate the business's estimated customer value and compare it with the CAC calculated in **(f)**. Also explain why this comparison alone cannot guarantee the profit that will actually be generated or the sustainability of the business.

(h) Explain what scalability is.

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Point!

1. Types and Management of Costs

(a) Fixed Costs and Variable Costs

(**Fixed Costs**): Costs that remain constant regardless of production or sales volume.

Examples include rent, insurance premiums, and equipment lease payments. Reviewing them can lead to continuous cost reductions.

(**Variable Costs**): Costs that increase or decrease depending on production or sales volume.

These include raw material costs and purchasing costs, which can be adjusted through improvements in production and purchasing.

→ By dividing costs into fixed costs and variable costs, companies can better understand management challenges.

(b) (**Trade-off**): A relationship in which obtaining one thing requires giving up another.

For example, if a company focuses too much on reducing costs, product quality and customer satisfaction may decrease.

→ Companies are required to manage their businesses while balancing various factors.

(c) (**Break-even Point (BEP)**): The sales volume at which total revenue and total costs are equal, resulting in neither profit nor loss.

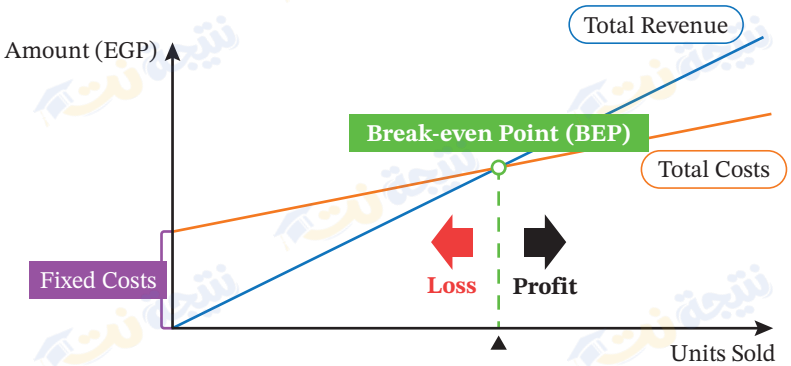
It can be calculated using the following formula:

Break-even point (units) = Fixed costs ÷ (Selling price per unit − Variable cost per unit)

For example, if fixed costs are 6,000 EGP, the selling price is 80 EGP per unit, and the variable cost is 50 EGP per unit,

6,000 ÷ (80 − 50) = 200 units

If sales volume exceeds this point, profits are generated. If sales fall below it, losses occur.



Beyond this point, if more units are sold, the business will make a profit; if fewer units are sold, it will incur a loss.

→ Understanding the break-even point helps companies estimate the sales level and pricing needed to sustain their business.

2. Types of Profit and How to Read Them

(a) The Stages of Profit

(**Sales (Sales Revenue)**): The total amount of money earned from selling goods.

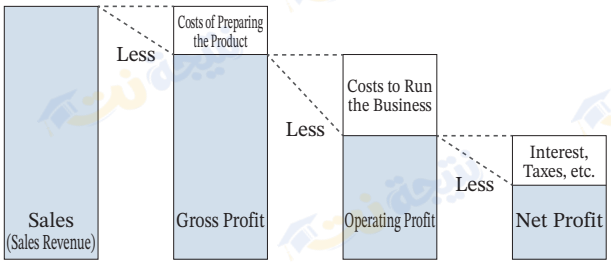
(**Gross Profit**): The profit that remains after subtracting the costs directly required to produce or purchase the product, such as material costs and purchasing costs, from sales.

(**Operating Profit**): The profit that remains after subtracting the costs required to run the business, such as rent and personnel costs, from gross profit.

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(**Net Profit**): The final profit calculated after considering interest payments, taxes, and other factors.

It represents the profit ultimately remaining with the company.



(b) Profitability and Cash Flow

(**Profit Margin**): The ratio that shows how much profit is generated relative to sales. In general, it is calculated as "profit ÷ sales × 100," and the value differs depending on which stage of profit is used.

The higher the figure, the more efficiently the company is considered to be generating profit.

(**Cash Flow**): The movement of actual cash into and out of a business.

Even if profits appear on accounting records and the profit margin seems high, if the timing of cash inflows and outflows does not match, cash on hand may become insufficient and cause management difficulties.

For example, suppose that a company has recorded sufficient profit but has not yet received 30,000 EGP of its sales revenue from customers. If the company must pay 20,000 EGP to suppliers this week, it may not have enough cash on hand.

→ It is important to understand not only profits but also the flow of cash.

3. The Use of Profits and Reinvestment

Net profit is allocated between dividends to shareholders and retained earnings within the company.

(a) (**Dividends**): The distribution of part of a company's net profits to shareholders.

They are an important source of income for investors and help increase a company's attractiveness.

(b) (**Retained Earnings**): Profits that are kept within the company instead of being distributed externally as dividends.

- (**Reinvestment**): Investment in new equipment, product development, and human resource development to support the company's future growth.

  Such investment can improve product quality and strengthen competitiveness.
- Working Capital: Funds needed to maintain day-to-day business operations, such as purchases, wages, and rent.
- Reserve Funds: Funds set aside to prepare for future expenses, declines in sales, emergencies, and other situations.

Reinvestment supports business growth, and maintaining sufficient working capital and reserve funds strengthens financial stability.

Companies should allocate retained earnings among these uses, taking into account growth opportunities, cash flow needs, debt obligations, and uncertainty in the economic environment.

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Try

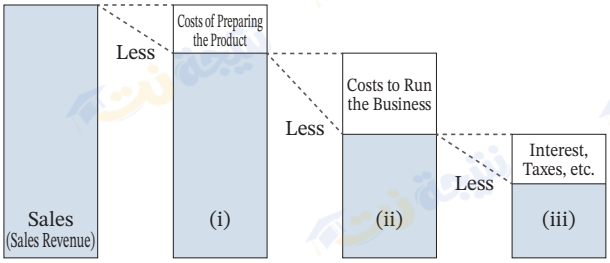
1. Answer the following questions.

(a) What kinds of fixed costs and variable costs are there in a company's costs? Give examples of each.

(b) Explain what the break-even point is.

2. Answer the following question.

(c) Write the appropriate terms in the blanks in the diagram below about a company's profits.



3. Answer the following questions.

(d) Explain what retained earnings are.

(e) In what ways can a company use its retained earnings?

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Point!

In modern society, (**Entrepreneurship**), which refers to the attitude and ability to discover opportunities and create new value, is highly valued.

A company that has a strong entrepreneurial mindset and aims for rapid growth by using new technologies and business models is called (**a Startup**). It is expected to play an important role in revitalizing the economy and society.

Although entrepreneurship is not limited to startups or businesses that use new technologies, here, as practice for the future, let's develop an idea for an app-based business as one example.

1. Find a (Need)

A business cannot succeed unless it provides products or services that people actually need.

(a) Make a list of problems or difficulties in school life or your local community.

(b) Choose one issue that people might want to solve even if they have to pay money for it.

(c) Develop an app that could solve that problem.

2. Prepare to Turn the Idea into a Business

(a) (**Value Proposition**)

You must be able to explain what kind of new value your idea provides to customers.

- Organize what kind of problem the product or service solves.
- Organize the reasons why people should buy the product or service.

(b) (**Market Research**)

Research how many people may need the product or service and how much they would be willing to pay. Conduct a simple survey of five students at your school and summarize the results using spreadsheet software. Do not collect names or other personal information.

If spreadsheet software is not available, print out **the Paper-Based Spreadsheet Template** on page 52 and perform the calculations with a calculator.

	A	B	C
1	Respondent	Level of Need	How much would you pay? (EGP)
2	a	4	650
3	b	1	50
4	c	3	420
5	d	3	515
6	e	2	175
7	Average	2.6	362

Options for Level of Need

4: Definitely want it.

3: Would like it if possible.

2: Don't really want it.

1: Don't need it.

- The function (**=AVERAGE(B2:B6)**) has been entered.
- The function (**=AVERAGE(C2:C6)**) has been entered.

This five-person survey is a simplified model of market research. Actual market research generally involves larger and more diverse samples and more complex methods.

3. Decide on a Business Model

(**Business Model**): A system that explains how a company creates value, provides it to customers, and earns profits.

(a) Decide on the business model (Revenue Streams), which shows how the company earns revenue.

- (**One-time Purchase Model**): A model that earns revenue each time it sells a product or provides a service.
- (**Subscription Model**): A model that earns revenue through regular fixed payments while customers continue using the service.
- (**Advertising Model**): A model that earns revenue through advertising fees.
- (**Commission Model**): A model that earns revenue as a commission when a transaction is completed.

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(b) Decide the Price, Estimate the Number of Users, and Predict Costs and Profits. Costs are divided into:

- (**Fixed Costs**): Costs that remain constant regardless of production or sales volume.
- (**Variable Costs**): Costs that increase or decrease depending on production or sales volume.

(c) Assume a certain number of users and a target period, estimate the costs and revenue for that period, and create an Estimated Costs and Revenue table. Use the same period for all estimates.

The table below is a simplified example and omits some rows for space. When creating your own table, list all cost and revenue items without skipping rows.

	A	B	C	D	E	F
1	Costs				Revenue	(EGP)
2	Fixed Costs	(EGP)	Variable Costs	(EGP)		
3	App Development	450,000	Server Usage Fees	35,000	Annual Subscription Fees	1,200,000
4	App Store Registration Fees	8,000	Payment Processing Fees	50,000	Monthly Subscription Fees	850,000
5	Personnel Costs	220,000	Cloud Service Fees	40,000	In-App Purchase Revenue	300,000
15	Office Expenses	60,000	Free Trial User Costs	25,000	Corporate Contract Revenue	500,000
16	Total	950,000	Total	220,000	Total	3,100,000
17						
18	Total Costs	Total Revenue	Balance			
19	1,170,000	3,100,000	1,930,000			

*This estimate is based on an assumed user base of 10,000 people.

- The function (**=SUM(B3:B15)**) has been entered.
- The function (**=SUM(D3:D15)**) has been entered.
- The function (**=SUM(F3:F15)**) has been entered.
- The function (**=B16+D16**) has been entered.
- The function (**=F16**) has been entered.
- The function (**=B19 – A19**) has been entered.

If the Balance (cell C19) is negative, estimated costs exceed estimated revenue under the assumptions used. In that case, the business plan needs to be reconsidered.

Try

(a) Develop a New App

(i) Find a need and develop an idea for an app that could solve the problem.

(ii) Explain in writing the value that the app idea would provide.

(iii) Show (ii) to five other students at your school and conduct a survey asking:

- whether they think the proposed app would be necessary
- how much they would be willing to pay

Then summarize the results using spreadsheet software.

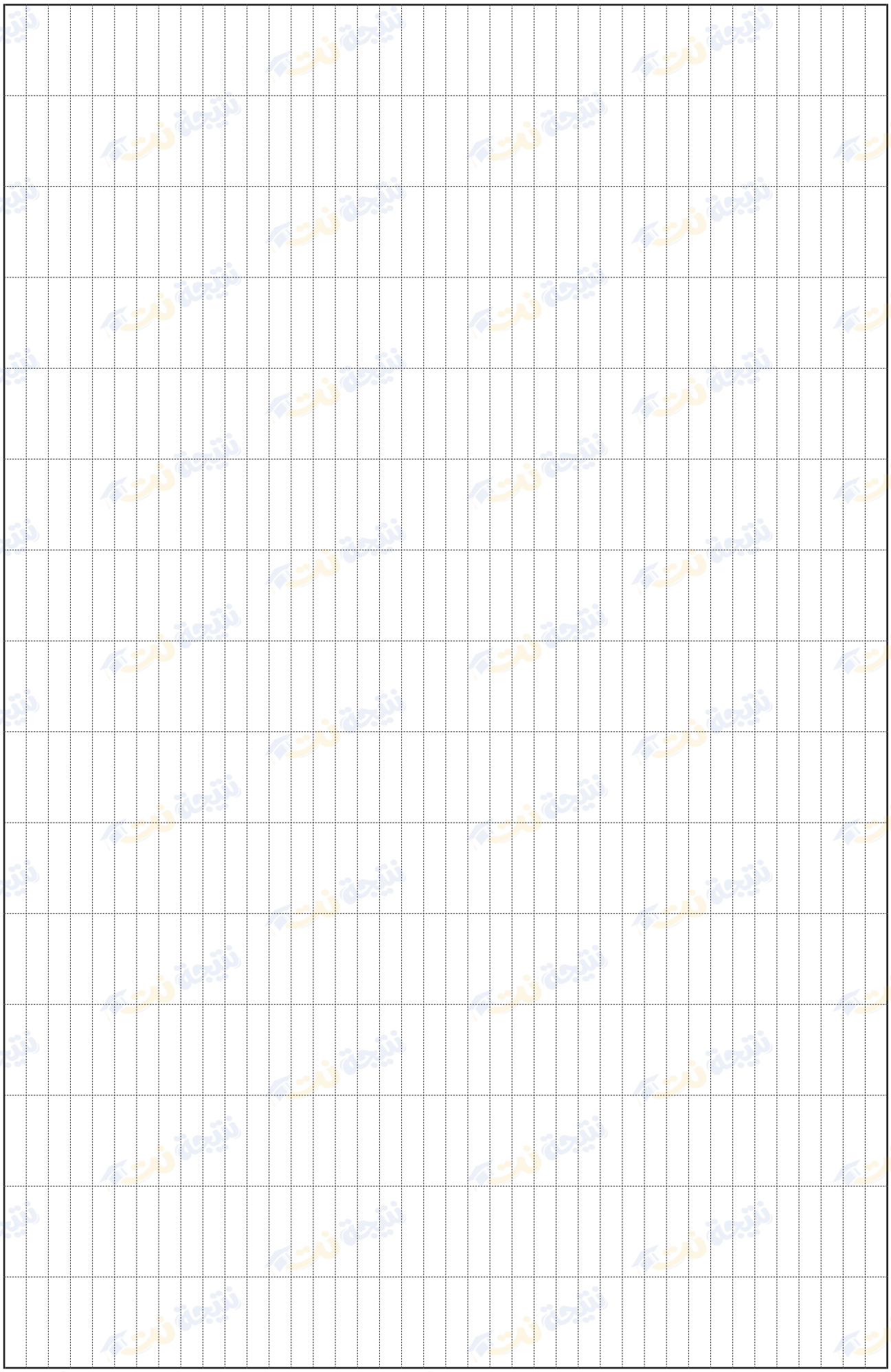
(b) Decide on a Business Model

(i) Decide how the proposed app would be provided and through which revenue streams it would earn revenue.

(ii) Based on the business model in (i), use a simplified assumption of 10,000 users over one year to estimate the projected balance using spreadsheet software. This number is used only to simplify the exercise and does not represent a realistic target for every business. If the projected balance is negative, reconsider the app idea, business model, costs, or revenue assumptions.

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Paper-Based Spreadsheet Template



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Point!

1. What Is Investment?

(a) Definition of Investment

Investment means committing money or other resources to businesses or other purposes in expectation of future returns while accepting uncertainty and risk.

The level of risk and the expected return differ depending on the investment.

Investors may lose some or all of the money invested (**the principal**). In addition, if the return does not exceed the rate of inflation, they cannot earn a real profit.

(b) Types of Money Management

- (**Savings**): Depositing money in a bank or other financial institution. Savings generally involve a low risk of losing the principal, but the returns are also generally low.
- (**Investment**): Committing money to businesses or assets in the expectation of future returns. Compared with savings, investment generally involves a higher risk of losing the principal, but it may also offer higher returns.
- (**Speculation**): Trading assets in the expectation of earning high returns from short-term price fluctuations. Since short-term price movements are difficult to predict, speculation involves a high risk of loss.

(c) Points to Consider Before Investing

Before considering an investment, people should confirm whether the (**risk**) involved is within their risk tolerance, how long the (**investment period**) is, how much the (**fees**) are, and whether the investment is suitable for their objectives and circumstances.

They should also consider whether they have secured sufficient funds for essential living expenses and emergencies, and whether they have any debts that should be repaid before investing.

2. Risk and Return

(a) Relationship between Risk and Return

(**Risk**): The uncertainty of how much the result of an investment may change.

It includes the possibility of both negative and positive changes, not just losses.

(**Return**): The overall result of an investment, which may be positive or negative.

In general, investments that are expected to produce high returns tend to have results that fluctuate greatly. This is called (**high risk, high return**). On the other hand, investments with low risk tend to produce smaller profits. This is called (**low risk, low return**).

There is no investment that offers both low risk and high return.

(b) Types of Risk

- (**Market Risk**): The risk that the value of assets you hold may fluctuate due to overall economic conditions and market trends, regardless of the performance of the individual investment.
- (**Credit Risk**): The risk that the person, company, or organization you invested in or lent money to may be unable to repay the money as promised due to financial difficulties or other problems.
- (**Liquidity Risk**): The risk that you may not be able to quickly convert the assets you hold into cash when you want to sell them.
- (**Exchange Rate Risk**): The risk that the value of a foreign asset, measured in the home currency, changes because of changes in exchange rates.

  For example, when people hold U.S. stocks or bonds, even if their dollar-denominated prices do not change, their value in Egyptian pounds (EGP) will increase or decrease if the exchange rate between the Egyptian pound (EGP) and the dollar changes.

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If the EGP appreciates, the return measured in EGP tends to become smaller. If the EGP depreciates, the return measured in EGP tends to become larger.

(c) Risk Tolerance and Diversification

(**Risk Tolerance**): The idea of how much loss or price fluctuation a person can accept.

Risk tolerance differs depending on age, income, asset situation, investment purpose, and other factors.

3. Main Types of Investment Assets

(a) (**Stocks**): Investments in which people provide funds to a corporation by buying shares issued by the company.

Investors may receive (**dividends**) according to the company's profits. They may also earn a return through capital gains if the stock price rises.

Stocks may offer relatively high returns, but their prices can fluctuate greatly depending on company performance and economic conditions, and investors may incur losses.

(b) (**Bonds**): Certificates issued by governments, local governments, or companies to borrow money from investors.

In general, investors receive interest while holding bonds, and the principal is repaid at maturity if the issuer is able to meet its obligations.

Compared with stocks, bonds tend to have smaller price fluctuations, but they are not risk-free. Their prices may change, and investors may incur losses.

(c) (**Real Estate Investment**): An investment in which people purchase land or buildings and expect returns from an increase in the property's value and rental income from leasing the property to others.

Property values and rental income may decrease. In addition, when investors try to sell the property and convert it into cash, it may take time to find a buyer, so real estate investments have relatively high liquidity risk.

(d) (**Investment Fund**): A financial product in which money collected from many investors is invested in multiple assets by professional fund managers. It is easy to start with a small amount of money and may help reduce risk through diversification.

However, because the value of its investments fluctuates, the principal may decrease.

→ It is important to compare the risk, return, and liquidity of investment options and choose investments that are within your own risk tolerance.

Try

1. Answer the following questions.

(a) Briefly explain what kind of economic activity investment is.

(b) Explain why investment can be a way to prepare for inflation.

2. Answer the following questions.

(c) Explain what kind of characteristic of financial products is meant by high risk, high return.

(d) When people hold U.S. stocks denominated in dollars, if the EGP appreciates against the dollar, what happens to their value measured in EGP, even if the stock price itself does not change?

3. Answer the following questions.

(e) In general, which tends to involve greater risk and offer potentially higher returns, stocks or bonds? Also explain why.

(f) Explain what an investment fund is.

(g) Person A needs funds for an essential payment in six months and cannot accept a large loss. Person B has stable emergency savings, can accept price fluctuations, and has a financial goal ten years from now.

For each person, identify the most important additional piece of information that should be confirmed before making an investment decision, and explain why. Examples include the amount needed, liquidity needs, fees, existing debts, the reliability of the product and provider, including whether they are legally authorized, and the person's values.

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Point!

1. Basics of Stocks

(a) Stocks and Shareholders

(**Stock**): A unit of ownership in a company. People who purchase stocks provide funds to the company and become partial owners of it.

These owners are called (**Shareholders**). The more shares a shareholder owns, the larger the ownership interest in the company.

• Shareholders' Rights

Shareholders have the right to receive part of the company's profits as (**Dividends**). They also have voting rights in proportion to the number of shares they own at (**Shareholders' Meetings**), allowing them to participate in selecting directors and making decisions on the company's policies.

• Shareholders' Liability

Shareholders bear the risk of losing some or all of the money they invested. However, even if the company goes bankrupt, they are generally not liable for the company's debts beyond the amount they invested. This is called (**Limited Liability**).

(b) Returns from Stock Investment

Returns from stock investment can be divided into income gains and capital gains.

(**Income Gain**): Income earned by holding an asset. In the case of stocks, this mainly refers to dividends.

(**Capital Gain**): Profit earned by selling an asset. When investors sell shares at a higher price than the price at which they bought them, they can earn the difference as a capital gain.

2. Why Stock Prices Move

(a) Stock Price Fluctuations and Risk

(**Stock Price**): The price at which a stock is bought and sold in the market.

Stock prices change depending on company performance, future prospects, economic conditions, and other factors. Stocks can be expected to have high profitability, but their prices may fall below the purchase price and cause losses. Therefore, stocks have the characteristic of (**high risk, high return**).

(b) Demand and Supply

Because stocks are bought and sold in the market, their prices change according to the relationship between demand and supply in that market.

(c) Company Performance and External Environment

When a company has strong (**company performance**) and future growth is expected, more people want to buy its shares, so the stock price tends to rise. On the other hand, when performance worsens, the stock price tends to fall.

In addition, the (**external environment**), such as exchange rates and domestic and international economic conditions, also affects stock prices.

For example, for companies involved in exports and imports, changes in exchange rates can affect profits, and this may lead to changes in stock prices.

In addition, (**Economic Indicators**), such as the inflation rate, unemployment rate, and economic growth rate, are announced by the government and the central bank. These indicators may cause stock prices to fluctuate regardless of the performance of individual companies.

(d) Market Sentiment and Bubbles

(**Market Sentiment**): The expectations and concerns that investors have about the future of the market or a company.

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(**Bubble**): A situation in which overly optimistic market sentiment causes asset prices to continue rising far beyond their real value.

During a bubble, speculative transactions may increase. However, when expectations collapse, a sharp fall in stock prices, called a (**bubble burst**), may occur.

→ In stock investment, it is important to look not only at short-term price movements but also at the company's fundamental value and long-term growth potential.

3. How the Stock Market Works

(**Stock Market**): A market where stocks are issued and traded.

(**Stock Exchange**): A place or system for buying and selling stocks and other securities fairly and smoothly.

The representative stock exchange in Egypt is the (**Egyptian Exchange (EGX)**).

(**Listing**): The process by which a company's shares are admitted to trading on a stock exchange.

To have its shares listed, a company must meet certain requirements under the applicable rules, such as those concerning company size, information disclosure, and financial condition.

(**Initial Public Offering (IPO)**): An IPO is often conducted in connection with a listing. However, a listing means that shares are admitted to trading on a stock exchange, whereas an IPO means that shares are offered to the general public for the first time.

(**Stock Price Index**): An indicator calculated using a specific methodology to show the movement of the overall stock market based on the stock prices of several representative companies.

(**Stock Price Chart**): A chart showing changes in a stock's price over time. It generally includes elements such as the following.

Candlesticks: Each candlestick shows the opening price, high, low, and closing price over a certain period.

Moving Average: A line showing the average closing price over a certain period.

Trading Volume: The number of shares traded during that period.

A stock price chart can be used to read price movements and how actively the stock is traded, but a company's performance or future stock price cannot be judged from the chart alone.

Company A Stock Price Chart (Past 50 Days)



NOTE: This company and stock price chart are fictional and were created for educational purposes.

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Try

1. Answer the following questions.

(a) Briefly explain the rights of shareholders, the investment risk they bear, and limited liability.

(b) List the returns and risks associated with owning stocks.

2. Answer the following questions.

(c) Why do stock prices fluctuate? Explain using several factors.

(d) Explain what an economic bubble is and how it collapses.

3. Answer the following questions.

(e) Explain what an IPO is.

(f) State the representative stock exchange in Egypt.

(g) Explain what a stock price index is.

(h) Refer to the stock price chart at the end of Point and answer each of the following questions.

On July 21, Hypothetical Company A officially announced that its sales had increased compared with the same period of the previous year, while its debt had also increased. Around the same time, an unverified social media post claiming that "this company's stock price will double soon" spread.

(i) How did the stock price and trading volume change around July 21?

(ii) From the company's official announcement, identify one piece of positive information and one piece of information that requires caution.

(iii) What other information should be checked, in addition to the stock price chart and the announcement above, to assess the company's financial condition?

(iv) Can the social media claim that "the stock price will double soon" be trusted as it is? Explain the reason for your answer.

(i) Read the following investment solicitation and answer each of the following questions.

"If you send money today, you are guaranteed to earn a 30% return in one month. There is no risk of loss. This opportunity is available today only. It has also been approved by the relevant authorities."

(i) Identify three expressions in this solicitation that should be treated with caution, and explain why each one is a warning sign.

(ii) If you receive this kind of solicitation, what actions should you take before sending any money or personal information? Give two examples.

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Point!

1. Principles of Diversification

(a) Three Types of Diversification

(**Diversification**): Investing money in several assets, regions, or time periods instead of concentrating it in one investment.

In the world of investment, there is an idea: "Do not put all your eggs in one basket." If you concentrate your money in one investment, you may suffer a large loss when the price of that investment falls.

By dividing investments among several targets, even if one asset falls in value, losses may be covered by other assets.

(**Asset Diversification**): Investing in different types of assets, such as stocks, bonds, and investment funds, whose prices move in different ways. When the price of one asset falls, another asset may help support the overall value of your investments.

(**Regional Diversification**): Investing across multiple countries and regions.

Even when the economy of one country is weak, another country may be growing. By diversifying by region, you can also diversify by currency and limit the impact of exchange rate fluctuations to only part of your overall investments.

(**Time Diversification**): Investing little by little at different times instead of investing a large amount all at once.

By investing at different times, you can avoid buying everything at once when the price is high and average out the purchase price.

However, because multiple assets may decline in value at the same time, diversification does not reduce the risk of loss to zero. Investing at different times also does not guarantee a lower average purchase price or a profit.

(b) Installment Investment and Rebalancing

(**Installment Investment**): A method of continuously investing a fixed amount of money at fixed times, such as every month.

With installment investment, you invest a fixed amount of money at regular intervals. When prices are high, that amount buys fewer units, and when prices are low, it buys more units.

As a result, it becomes easier to average out the purchase price.

(**Portfolio**): The combination of assets that a person holds.

Over time, the proportions in a portfolio change because asset prices fluctuate. Buying and selling assets to bring the portfolio closer to its original allocation is called (**rebalancing**).

→ Rebalancing makes it easier to maintain the balance between risk and return.

2. Evaluating Companies

(a) Indicators for Evaluating Companies

- (**PER (Price Earnings Ratio)**): An indicator that shows the ratio of a company's stock price to its earnings per share.

  PER = Stock Price ÷ Earnings per Share (EPS)

  In general, the lower the PER is, the more undervalued the stock is considered in relation to profit. However, a high PER may also reflect expectations for future growth.

- (**PBR (Price Book-value Ratio)**): An indicator that shows the ratio of a company's stock price to its net assets per share.

  PBR = Stock Price ÷ Net Assets per Share

  Net Assets = Assets − Liabilities

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If the PBR is below 1, this may indicate that the market values the company at less than its net asset value.

- (**ROE (Return on Equity)**): An indicator that shows how efficiently a company generates profit using its equity.

  ROE (%) = (Net Profit ÷ Equity) × 100

  The higher the number, the more efficiently the company uses its equity to generate profit.

(b) Quantitative Analysis and Qualitative Analysis

- (**Quantitative Analysis**): An approach to evaluating a company by measuring its performance using numerical indicators such as PER, PBR, and ROE.
- (**Qualitative Analysis**): An approach to evaluating a company using strengths that do not appear directly in numbers, such as its management team, brand, and competitive advantages.

→ A company should not be evaluated using only one indicator. A low PER may reflect low expectations for future growth or high risk. A high ROE may also be affected by a high level of debt or one-time gains.

Therefore, it is important to combine multiple quantitative indicators and also consider qualitative factors.

(c) Two Investment Styles

(**Value Investing**): A method of investing in stocks that are considered undervalued compared with the company's true value.

This approach aims for relatively stable returns by waiting for the market to evaluate the company properly.

(**Growth Investing**): A method of investing in companies that are expected to have high future growth.

Large returns can be expected, but there is also a risk if the company does not grow as expected.

3. Investment Tools

(**Investment Fund**): A financial product in which money collected from many investors is pooled and invested by specialists in stocks, bonds, and other assets.

It is easy to start with a small amount of money and makes broad diversification, which is difficult for individuals, easier.

(**ETF (Exchange-Traded Fund)**): A type of investment fund that is listed on a stock exchange and can be traded in the market like stocks.

ETFs can be bought and sold during trading hours, like stocks. In some cases, their management costs are lower than those of ordinary investment funds.

(**Index Investing**): An investment method in which investors use investment funds or ETFs designed to track indicators such as stock price indexes and invest broadly across the overall market.

Because it invests broadly in the whole market rather than choosing specific companies, it is easy to gain the effect of diversification.

However, fees, tracking differences, and other factors may cause investment performance to differ from the index. In addition, because products differ in the assets they invest in, risks, costs, liquidity, and methods of tracking an index, it is important to carefully consider whether a product suits your financial situation and is consistent with Sharia and your personal values.

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Try

1. Answer the following questions.

(a) Why is diversification recommended, and why can it not eliminate the risk of loss? Briefly explain.

(b) There are mainly three ways to diversify investments. State the name of each and explain it.

2. Answer the following questions.

(c) A company's stock price is 1,200 EGP per share, and its earnings per share are 100 EGP. Calculate this company's PER.

(d) A company's stock price is 800 EGP per share, and its net assets per share are 1,000 EGP. Calculate this company's PBR.

(e) A company's net profit is 5 million EGP, and its equity is 50 million EGP. Calculate this company's ROE as a percentage.

(f) Why should indicators such as PER, PBR, and ROE not be used alone to evaluate a company? Briefly explain.

(g) Explain the difference between value investing and growth investing.

3. Answer the following questions.

(h) Explain what an investment fund is.

(i) Explain what index investing is and describe one advantage and one point to consider when choosing an index investment product.

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Point!

1. From Entrepreneur to Investor

In 4-16, you thought of your own company or app idea. In that activity, you found (**needs**) from familiar problems and organized the (**value proposition**), or what kind of value the company would provide to customers. You also considered (**business models**), such as the One-time Purchase Model and the Subscription Model, and examined how the company would earn revenue.

In 5-20, you will change your perspective and look at companies as investors. Investors do not judge a company only by whether its idea is interesting. They also consider whether the company can generate profit in the future, whether it can grow, and what kinds of risks it has before making an investment decision.

2. Looking at a Company as an Investment Target

Investment means providing money to a company or business in the hope of earning future profit. When investing in a company, it is necessary to check the following points.

Investors are in a position to share in the results of the company's growth and profits. For example, in stock investment, investors invest in a company by purchasing shares. If the company makes a profit, investors may receive part of it as (**dividends**). However, the stock price may also fall depending on the company's performance, future prospects, and economic conditions.

In general, investments that are expected to bring higher returns tend to have results that fluctuate more greatly. This characteristic is called (**high risk, high return**).

3. How to Play the Investment Game

In this activity, you will play an investment game based on the companies you thought of in 4-16.

(a) Choose a representative company for your group

First, form a small group and introduce the company each person thought of. Then discuss within the group and choose one representative company to enter in the investment game. When choosing the representative company, check the following points.

- Will everyone in the class agree with the needs assumed by the company?
- Will everyone in the class value what the company creates?
- Is the method for earning revenue shown concretely?
- Are there any unrealistic points in the number of users or price setting?
- Does the company have growth potential?
- Have the risks been examined sufficiently? Are there any hidden risks?
- Organize the issues that should be considered from a Sharia perspective.
  - Is the nature of the main business activity clearly explained?
  - Is it clearly explained what kind of contract or transaction generates the return?
  - Are the ownership, underlying assets, price, profit, risks, and other relevant aspects of the contract or transaction clearly explained?
  - Are there any matters concerning Sharia compliance that require confirmation by a relevant institution or expert?

Students should limit their role to organizing the issues and the reasons for them and should not make their own judgments regarding Sharia compliance.

(b) Presentation and decision on investment targets

- At the beginning, each group has 100 points.

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- Each group presents the company it has chosen to the class in turn. When presenting, pay attention to the following points.
  - Clearly show the needs assumed by the company and the value it creates.
  - Show the expected balance of revenue and costs as clearly as possible.
- Set aside time for questions and answers. When asking questions, pay particular attention to the following points.
  - Are there any unreasonable assumptions about the number of users, price setting, or method for earning revenue?
  - Are there any risks that have not been assumed?
- After all groups have finished their presentations, each group discusses and decides which companies to invest its 100 points in. Follow the rules below.
  - You may not invest in your own group's company.
  - You may concentrate your investment in one company, or diversify it among several companies.
  - Each group must invest at least 50 of its 100 points. It may choose not to invest some of the remaining points. Any points not invested are retained as cash and added unchanged to the final game score.
- The teacher records which group invested how many points in which company.

(c) Calculating the game score

Calculate the scores in the following way.

In this simplified game, the investment points each company receives reflect only the investment decisions made within the class, which serve as a simplified representation of market sentiment. They do not indicate or predict the company's actual value, management performance, or future results. In actual investment decisions, companies should not be evaluated solely on the basis of popularity or presentation skills.

This game is a simplified activity based on the information presented by each group. It does not simulate actual financial results or all the risk events that may affect a company after an investment is made.

[Company Score]

- Each group's company score is based on the total number of points invested in its representative company.
- The company that receives the most investment points and the company that receives the second-most investment points are identified based on the class's investment decisions.
- The group representing the company that receives the most investment points receives an additional 20 points, and the group representing the company that receives the second-most investment points receives an additional 10 points.

[Investor Score]

- A group that invested in the company that receives the most investment points receives twice the points it invested.
- A group that invested in the company that receives the second-most investment points receives 1.5 times the points it invested.
- Points invested in other companies are not returned.

→ The sum of the company score, the investor score, and the points retained as cash is announced as each group's final game score.

(d) Group reflection

In this game, both the ability to attract investment as a company and the ability to choose investment targets as an investor are tested. As a company, it is necessary to explain needs, value proposition, business model, growth potential, and risks clearly. As an investor, it is necessary to consider not only returns but also risks, and to choose between concentrated investment and diversified investment.

When reflecting on the investment results, consider the following points.

Which information or evidence most influenced your investment decision? Did any information change your initial judgment?

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- Why did you invest in that company? Did you accurately understand the market (**needs**) and the company's (**value proposition**) in order to make that decision?
- Did you concentrate your investment or diversify it? Did you consider the (**risks**) accurately?
- How did you predict the decisions of other investors, or other groups? Did you consider (**Market Sentiment**)?
- If you could invest again, would you change your investment targets or investment points? In that case, in what balance should you consider (**safety**), (**profitability**), liquidity, and (**growth potential**)?

In investment, profit is not always guaranteed. For this reason, it is important to research company information carefully, compare risks and returns, and be able to explain the reasons for your own decision.

Try

Let's actually play the investment game.

(a) Choose a representative company for your group.

(b) Each group gives a presentation and decides its investment targets.

(c) Calculate the game score.

(d) Reflect on the game score and investment decisions as a group.

(e) Summarize your reflections on the game and your investment decisions in a report and submit it to your teacher. Before submitting the report, check whether it includes the following points.

- What evidence did you use to make your investment decisions?
- How did you consider risk and uncertainty?
- How did you allocate your investment points? Why did you choose to concentrate or diversify your investments?
- How did you reconsider your investment decisions in response to new information obtained from the presentations of other groups or other sources?
- Does the report clearly explain your group's decisions and the reasons for them?

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Point!

1. What Is AI?

(**AI (Artificial Intelligence)**): Technology that enables computers to perform tasks such as recognizing patterns, making predictions, supporting decisions, and generating content.

Most AI used today learns statistical patterns from large amounts of data and uses them to process information and generate outputs. Therefore, even when AI appears to understand the meaning of information in the way humans do, its processing is not based on the same kind of understanding that humans have.

(a) Examples of Main Functions of AI

(**Prediction**): Predicting possible outcomes and their likelihood from data.

(**Classification**): Identifying common features and sorting information into categories.

(**Decision Support**): Providing information to help people make decisions.

(**Generation**): Creating new content such as text and images.

→ These functions are useful for supporting business activities.

(b) (**Machine Learning**): A major method of developing AI in which computers learn patterns from data instead of being given every rule by humans.

Insufficient or biased data may produce inaccurate or biased results.

(c) (**Generative AI**): AI that creates text, images, audio, code, and other content based on learned patterns. Its performance has rapidly improved, and it is now used in many fields.

(**Hallucination**): When generative AI produces plausible but factually incorrect or unsupported content.

(d) Limitations of AI

- Information entered into an AI service may be used by the service provider. Do not enter account numbers, card information, PINs, one-time passwords (OTPs), identification documents, confidential business information, or other people's personal data into publicly available AI tools.
- Generative AI may produce incorrect information through hallucinations, so important content should ultimately be checked by humans.
- AI itself does not make ethical judgments or bear responsibility. People who provide and use AI must be careful not to use it in ways that violate (**laws or social rules**).

2. FinTech and AI Finance

(**FinTech**): An approach that combines finance and technology to make financial services more efficient and advanced.

(a) BNPL and Credit Scoring

(**BNPL (Buy Now, Pay Later)**): A payment method in which people use goods or services first and pay for them later.

It is a payment service that uses IT and offers the convenience of being accessible through smartphones and the internet.

However, because payment is deferred, users may find it difficult to recognize how much they are spending. Therefore, they need to pay attention to the following points.

- Check not only the amount of each installment but also the total amount payable, including fees.
- Be aware that using multiple BNPL services may lead to multiple debts.
- Check age and eligibility requirements.

In some cases, AI-based credit scoring is used to assess the risk that users may fail to make payments.

(**Credit Scoring**): A system that analyzes a person's transaction history, behavioral data, and other information and expresses their creditworthiness as a numerical score.

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By using AI, financial service providers can assess users' creditworthiness and the risk of payment delays more quickly and efficiently.

However, when collecting and using transaction histories and behavioral data, financial service providers need to pay attention to privacy protection, fairness in assessment, transparency in the basis for decisions, and compliance with laws and regulations.

In addition, if the data used is insufficient or biased, the assessment results may be inaccurate or may unfairly disadvantage certain groups of people.

(b) New Financial Services and the Use of AI

(**Robo-advisor**): A service that proposes investment plans and supports investment management according to users' goals and risk tolerance. In some cases, AI is used or investments are managed automatically.

(**Fraud Detection**): AI also helps improve the safety of financial systems by analyzing transaction data to detect fraudulent transactions and money laundering.

These are examples of FinTech that make financial services more convenient by using AI and IT. While they are convenient, attention must be paid to data management, privacy protection, multiple debts, and other risks.

3. AI Startups

(a) Business Models of AI Startups

(**AI Startup**): A company that develops products or services using AI and aims for rapid growth. In some cases, it uses AI models or services provided by other companies instead of developing its own AI.

For AI startups to grow their businesses, it is important to choose how to provide AI-powered services and generate revenue. SaaS and data monetization are two representative approaches.

(**SaaS**): A form of service in which software is used as a cloud service through the internet, rather than being purchased and installed on a computer.

AI services often adopt pricing and contract models that encourage continued use, such as monthly or annual subscriptions, usage-based pricing, freemium plans, and enterprise contracts.

(**Data Monetization**): Using customer behavioral data and usage histories accumulated through business activities as valuable resources and turning them into revenue.

Because AI can analyze huge amounts of data at high speed, it is used for product recommendations, demand forecasting, more efficient inventory management, and other purposes.

However, the use of personal data cannot be justified solely on the grounds that it generates revenue or helps improve services. Personal data may be used only when there is a clear and lawful purpose and the conditions for responsible data use described below are met.

(b) Issues in Data Use and Corporate Social Responsibility

In SaaS and data monetization, large amounts of data, including personal information, may be collected and accumulated. To use personal data responsibly, companies need to meet the following conditions.

- Establish a clear and lawful purpose for using the data.
- Obtain lawful and valid consent from users when necessary.
- Collect only the data necessary for the stated purpose.
- Implement appropriate security measures.
- Limit the period for which data is retained to what is necessary.
- Clearly inform users how data is collected, used, and shared.
- Respect users' rights and be accountable for the use of data.

Even when a company's use of personal data generates revenue, that use may not be permitted if it is unfair, is carried out in a way that users could not reasonably expect, lacks adequate security, or is unrelated to the stated purpose.

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Try

1. Answer the following questions.

(a) Explain what generative AI is.

(b) What issues arise when using AI, and what kind of attitude is required? Write your own opinion.

2. Answer the following questions.

(c) Explain the meaning of the term FinTech.

(d) Give one example of FinTech, and explain what it is.

(e) Read the following case and answer questions (i)–(iii).

An advertisement offers a smartphone with a cash price of 12,000 EGP under a BNPL plan requiring 12 monthly payments of 1,100 EGP, an additional fee of 600 EGP.

(i) Calculate the total amount payable.

(ii) Explain why you should not decide whether to purchase the smartphone using BNPL by looking only at the monthly payment of 1,100 EGP.

(iii) Before using this BNPL service, what points other than the payments should you check? Give three examples.

3. Read the following case and answer the questions.

A company provides a diet app that calculates users' target calorie intake and the amount of exercise they need. The app asks users to enter their height and weight information and requests access to their location information, pedometer app, and address book.

(f) Identify the information and access that you think are necessary for the app's functions and those that you think are unnecessary. Explain your reasons.

(g) If users provide all the requested information and grant all the requested access, and the data is collected, who other than the users may be affected?

(h) How should the company deal with the collection of unnecessary data and with unnecessary data that has already been collected?

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Point!

1. Work and Society Changed by AI

The development of AI (artificial intelligence) and information and communication technology (ICT) is bringing major changes to the way people work and to the structure of society.

(a) AI-driven Automation

(**Automation**): The process by which machines and AI-based systems automate or support some of the tasks that humans have traditionally performed.

Calculations, data aggregation, and image classification are examples of (**routine tasks**), which follow established procedures and repeatedly perform the same type of processing. Such tasks are relatively easy for AI to automate or support, but even in such cases, humans need to check the quality, fairness, and safety of the results.

On the other hand, tasks that require creativity and flexibility, such as speaking to someone while considering their feelings, providing education suited to the situation, and developing ideas for new products, are called (**creative tasks**). It is difficult for AI to replace such tasks as a whole. AI can support some parts of them, but humans must continue to make the final decisions and take responsibility for the results.

(b) Job Transformation and New Skills

AI-driven automation has already begun in various fields.

(**Finance**)…AI supports the assessment of whether to approve loans.

(**Healthcare**)…AI indicates areas in images such as X-rays that may show signs of disease.

Automation has the benefit of allowing humans to use the time it creates for other tasks. In many cases, AI-driven automation does not replace an entire job with AI but changes the tasks and responsibilities assigned to humans within the job. Such changes are called (**Job Transformation**). On the other hand, demand for workers may decrease in some jobs.

At the same time, with the spread of AI, new jobs such as developing AI and using AI to create new services may become increasingly important.

→ While allowing AI to automate or support tasks for which it is well suited, humans need to develop not only new skills for developing and using AI, but also the skills required for tasks in which humans continue to play an important role, such as judgment, creativity, and interpersonal skills.

(c) Social Issues in the Use of AI

The spread of AI involves issues such as (**AI bias**), which is caused by bias in the data AI learns from, and privacy issues related to the handling of personal information.

AI itself cannot take responsibility for the consequences of AI-based decisions. Therefore, it is also important to consider (**Accountability**), or who should take responsibility when problems arise from such decisions. We need to understand the characteristics and limits of AI and think about how humans and AI should share roles.

2. AI Literacy and the Active Use of AI

(**AI Literacy**): The ability to understand the mechanisms and characteristics of AI and use it appropriately while considering both its benefits and risks. It consists of three pillars: "identifying," "protecting," and "using effectively."

(a) "Identifying" Inaccurate Information

AI has a weakness called (**Hallucination**), in which it generates plausible but incorrect information. In addition, some people use AI to intentionally create and spread false information.

(**Deepfake**): A fake video, audio recording, or image of a real person created using AI to make it appear that the person actually did or said something.

(**Fake News**): A phenomenon in which information that is not factual spreads as if it were true.

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Therefore, it is necessary not to accept AI outputs as they are, but to conduct (**Fact-checking**) by checking the sources of the information, the accuracy of numerical data, the assumptions, supporting evidence, missing information, and whether there are any questionable points or biases. For videos, audio recordings, and images, it is also important to check the original source and compare the content with other reliable information.

(b) "Protecting" Important Information

Information entered into AI may be stored as a record or used to train AI and improve services.

For all types of information—"one's own information," "other people's information," and "information belonging to an organization or school"—it is necessary to consider when, where, by whom, and how the information may be used and decide, from the perspective of (**Data Privacy**), whether it is appropriate to provide the information to AI. In particular, sensitive personal information, information about other people that they have not given permission to share, and confidential information belonging to an organization or school must not be entered into AI.

(c) "Using AI effectively" with Human Judgment and Responsibility

Instructions or questions entered into AI to tell it things such as "what one wants to know" or "what one wants it to do" are called (**Prompts**).

The technique of creating prompts that clearly specify the purpose, conditions, and assumptions in order to obtain desired results is called (**Prompt Engineering**), and it is one of the skills for using AI effectively.

AI literacy is not simply knowing how to operate AI or create effective prompts. It is a comprehensive ability to understand both its convenience and its risks, evaluate its outputs, and decide whether to accept, revise, or reject them while maintaining human judgment and responsibility.

As AI becomes more widespread in society, we need to identify inaccurate information, protect important information, and use AI effectively while making responsible judgments ourselves.

3. Personal Strategy in the Age of AI

(a) AI Strengths and Human Strengths

AI may outperform humans in processing speed and accuracy when performing (**routine tasks**), which follow established procedures and repeatedly involve the same type of processing.

In contrast, roles requiring Empathy, Ethical Judgment, and Creativity will continue to be handled mainly by humans.

(**Empathy**): Understanding another person's feelings and perspective and responding with care.

(**Ethical Judgment**): Deciding what should be valued and how one should act as a member of society.

(**Creativity**): Producing new ideas or value.

(b) Education in the Age of AI

With the development of AI, knowledge and technology are changing more rapidly. Therefore, it is necessary not to rely only on knowledge once acquired, but to keep learning.

(**Lifelong Learning**): Continuing to learn throughout life, including after completing formal education.

(**Skill Portfolio**): The idea of combining multiple skills, rather than relying on just one, to develop a unique set of strengths.

(c) Financial Literacy × AI Literacy

By developing both (**Financial Literacy**), the ability to understand the flow of money, and (**AI Literacy**), the ability to use AI effectively, and combining them, people can acquire a "tool for the future" that will help them navigate the coming age.

- Use AI to collect and clearly organize information and numerical data related to economics and finance.
- Use financial literacy to interpret that information and identify appropriate options.
- Apply the uniquely human strengths of empathy, ethical judgment, and creativity to make desirable choices.

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Try

1. Answer the following questions.

   (a) Give one example of AI-driven automation that has already begun and explain it.

   (b) Explain what we should be careful about when expanding the use of AI in society.

2. Answer the following questions.

   (c) What is AI literacy? Explain it.

   (d) When using economic or financial information organized by AI, what points should be checked, and who should make the final decision?

3. Answer the following questions.

   (e) What is a skill portfolio? Explain it.

   (f) Why is it important to continue learning in the age of AI? Also, what skills do you think we should acquire? Write your own opinion.

4. Read the following case and answer the questions.

   You received the following message.

   This is a safe investment approved by a public authority. If you transfer 5,000 EGP, you are guaranteed to earn a 20% profit within 30 days. There is no possibility of loss. This opportunity is available only to those who apply today. Transfer the money to the designated account immediately.

   You asked AI to summarize the message, and it provided the following response.

   This investment has been approved by a public authority, and a 20% return is guaranteed within 30 days. If you invest 5,000 EGP, the profit will be 1,000 EGP, and the total amount received will be 6,000 EGP.

   (g) Identify the warning signs contained in the message and explain why each one is a warning sign.

   (h) Explain what should be checked and which sources should be used to verify the approval by the public authority, the reliability of the sender or service provider, and the claim that a 20% profit is guaranteed.

   (i) Calculate the profit equal to 20% of 5,000 EGP and the total amount received after the investment, and check whether the AI's calculation is correct. Also state what can and cannot be concluded from this calculation.

   (j) Compare the following three options: "transfer the money immediately," "keep the funds available to maintain liquidity," and "seek advice from a public authority or a registered professional." State how it would be appropriate to act and explain your reasons.

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