

# The Economizing Problem

Chapter 2 explains the central problem of economics: Resources—the ultimate means of satisfying economic wants—are scarce *relative* to the insatiable wants of society. Economics as a science is the study of the various aspects of the behavior of society in its effort to allocate the scarce resources—land, labor, capital, and entrepreneurial ability—in order to satisfy its unlimited desire for consumption as best it can.

Economics is called the science of efficiency. To understand what efficiency means, however, you must first define its two characteristics: **full employment** and **full production**. Full employment means that all productive resources available to the economy are being used. Full production requires that two types of efficiency—allocative and productive—are being achieved. **Allocative efficiency** means that resources are being devoted to the production of the goods and services society most highly values. **Productive efficiency** entails producing this optimal product mix in the least costly way.

The **production possibilities curve** is used in this chapter's tables and graphs to discuss the major concerns of economics. The production possibilities model is a valuable device for illustrating the meaning of many concepts defined in the chapter—scarcity, choice, tradeoffs, opportunity cost, allocative and productive efficiency, unemployment, economic growth, and international trade. It can also be applied to many real economic situations, as you will learn from the examples in the text. This basic economic model is the first and one of the most important ones presented in the text that you will be using to understand the economic world.

Every economy needs to develop an **economic system** to respond to the economizing problem of limited resources and unlimited wants. The two basic types of systems are the **market system** and the **command system**. In the market system there is extensive private ownership of resources and the use of markets and prices to coordinate and direct economic activity. In the command system, there is extensive public ownership of resources and the use of central planning for most economic decision making in the economy. Chapters 3 through 6 explain in greater detail how the U.S. economy uses the market system to respond to the economizing problem.

The **circular flow model** (or diagram) is a device that illustrates for a capitalistic economy the relationship between households and businesses, the flow of money and economic goods and services between households

and businesses, their dual role as buyers and sellers, and the two basic types of markets essential to the capitalistic process.

## ■ CHECKLIST

When you have studied this chapter you should be able to

- Explain the economizing problem in terms of economic wants and resources.
- Identify four types of economic resources.
- Describe the resource payments made in return for each economic resource.
- Write a definition of economics that incorporates the relationship between resources and wants.
- Explain why full employment and full production are necessary for the efficient use of resources.
- Distinguish between allocative efficiency and productive efficiency.
- State the four assumptions made when a production possibilities table or curve is constructed.
- Construct a production possibilities curve when you are given the appropriate data.
- Define opportunity cost and utilize a production possibilities curve to explain the concept.
- Show how the law of increasing opportunity cost is reflected in the shape of the production possibilities curve.
- Explain the economic rationale for the law of increasing opportunity cost.
- Use marginal analysis to define allocative efficiency.
- Explain how allocative efficiency determines the optimal point on a production possibilities curve.
- Use a production possibilities curve to illustrate unemployment and productive inefficiency.
- Use the production possibilities curve to illustrate economic growth.
- Explain how international trade affects a nation's production possibilities curve.
- Give examples and applications of the production possibilities model.
- Compare and contrast the market system (capitalism) with the command system (socialism).
- Draw the circular flow model, correctly labeling the two markets and the real and money flows between the two sectors in this simplified economy.

## ■ CHAPTER OUTLINE

1. The study of economics rests on the bases of two facts:
  - a. Society's material wants are unlimited.
  - b. The economic resources that are the ultimate means of satisfying these wants are scarce in relation to the wants.
    - (1) Economic resources are classified as land, capital, labor, and entrepreneurial ability. They are called *factors of production*.
    - (2) The payments received by those who provide the economy with these four resources are in the form of rental income, interest income, wages, and profits, respectively.
    - (3) Because these resources are scarce (or limited), the output that the economy is able to produce is also limited.
  
2. Economics, then, is the study of how society's scarce resources are used (administered) to obtain the greatest satisfaction of its economic wants. To be efficient in the use of its resources, an economy must achieve both full employment and full production.
  - a. **Full employment** means that the economy is using all available resources.
  - b. **Full production** means that all resources used for production should contribute to the maximum satisfaction of society's economic wants. Full production implies that there is
    - (1) *productive efficiency*, in which the goods and services society desires are being produced in the least costly way.
    - (2) *allocative efficiency*, in which resources are devoted to the production of goods and services society most highly values.
  - c. The **production possibilities table** indicates the alternative combinations of goods and services an economy is capable of producing when it has achieved full employment and productive efficiency.
    - (1) The four assumptions usually made when a production possibilities table is constructed are that full employment and productive efficiency, fixed resources, fixed technology, and two products are being considered.
    - (2) The table illustrates the fundamental choice every economy must make: what quantity of each good it must sacrifice to obtain more of another good.
  - d. The data in the production possibilities table can be plotted on a graph to obtain a production possibilities curve.
  - e. The opportunity cost of producing an additional unit of one product is the amount of other products that are sacrificed. The **law of increasing opportunity costs** reflects that the opportunity cost of producing an additional unit of a product (the marginal opportunity cost) increases as more of that product is produced.
    - (1) The law of increasing opportunity costs results in a production possibilities curve that is concave (from the origin).
    - (2) The opportunity cost of producing an additional unit of a product increases as more of the product is produced because resources are not completely adaptable to alternative uses.
  
3. Different outcomes will occur when assumptions underlying the production possibilities model are relaxed.
  - a. **Unemployment.** The economy may be operating at a point inside the production possibilities curve if the assumption of full employment and productive efficiency no longer holds. In this case, there will be an unemployment of resources and production will not occur in the least costly way.
  - b. **Economic Growth.** The production possibilities curve can move outward if the assumption of fixed resources or the assumption of no technological change is dropped.
    - (1) Economic growth can occur when there is an expansion in the quantity and quality of resources.
    - (2) It can increase when there is technological advancement.
    - (3) The combination of goods and services an economy chooses to produce today helps determine its production possibilities in the future.
  - c. **Trade.** International specialization and trade allow a nation to obtain more goods and services than is indicated by its production possibilities curve. The effect on production possibilities is similar to an increase in economic growth.
  
4. There are many real-world examples and applications of the production possibilities model.
  - a. Events leading to unemployment and productive inefficiency may cause nations to operate inside their production possibilities curves. Examples would be The Great Depression in the United States, recessions in different nations, and policies of racial, ethnic, or religious discrimination.
  - b. It illustrates tradeoffs and opportunity costs. Controversies over the use of land (for wilderness or production) or decisions over how public funds should be spent (for more criminal justice or more education) are two applications.
  - c. The curves can shift outward or inward. Recent advances in technology shifted the curve outward for the United States. The effects of military warfare in Yugoslavia in recent years reduce the country's productive capacity and shifted its curve inwards.

5. An **economic system** is a set of institutions and a coordinating mechanism to respond to the economizing problem.

a. The **market system** (capitalism) has extensive private ownership of resources and uses markets and prices to coordinate and direct economic activity. In pure (*laissez-faire*) capitalism there is a limited government role in the economy. In a capitalist economy such as the United States, government plays a large role, but the two characteristics of the market system—private property and markets—dominate.

b. The **command system** (also called *socialism* or *communism*) is based primarily on extensive public ownership of resources and the use of central planning for most economic decision making. There used to be many examples of command economies (e.g., Soviet Union), but today there are few (e.g., Cuba, North Korea). Most former socialistic nations have been or are being transformed into capitalistic and market-oriented economies.

6. The circular flow model is a device used to clarify the relationships between households and business firms in a market economy. In resource markets, households sell and firms buy resources, and in product markets, the firms sell and households buy products. Households use the incomes they obtain from selling resources to purchase the goods and services produced by the firms, and in the economy there is a real flow of resources and products and a money flow of incomes and expenditures.

■ HINTS AND TIPS

1. Chapter 2 presents many economic definitions and classifications. Spend time learning these definitions now because they will be used in later chapters, and you must know them if you are to understand what follows.

2. The production possibilities graph is a simple and extremely useful economic model. Practice your understanding of it by using it to explain the following economic concepts: scarcity, choice, opportunity cost, the law of increasing opportunity costs, full employment, full production, productive efficiency, allocative efficiency, unemployment, and economic growth.

3. Opportunity cost is always measured in terms of a foregone alternative. From a production possibilities table, you can easily calculate how many units of one product you forgo when you get another unit of a product.

4. In the section on the law of increasing opportunity costs, note the distinction made between two types. The *marginal* opportunity cost measures what is given up to obtain an additional unit. Note too that the size of one unit can vary (e.g., 2 to 3 or 200 to 300). The *total* opportunity cost measures what is given up to obtain a specific number of units (e.g., 3 or 300 units). Review Quick Quiz 2-1 in the text.

■ IMPORTANT TERMS

economizing problem	production possibilities table
utility	production possibilities curve
economic resources	opportunity cost
land	law of increasing opportunity costs
capital	economic growth
investment	unemployment
labor	economic system
entrepreneurial ability	market system
factors of production	command system
full employment	traditional economies
full production	resource market
productive efficiency	product market
allocative efficiency	circular flow model
consumer goods	
capital goods	

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SELF-TEST

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■ FILL-IN QUESTIONS

1. The economizing problem arises because society's economic wants are (limited, unlimited) \_\_\_\_\_ and its economic resources are \_\_\_\_\_.

2. Consumers want to obtain goods and services that provide (resources, utility) \_\_\_\_\_. Some products that meet this objective are (capital goods, necessities) \_\_\_\_\_, while others are (investment goods, luxuries) \_\_\_\_\_.

3. The four types of resources are

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

4. Both consumer goods and capital goods satisfy human economic wants. The consumer goods satisfy these wants (directly, indirectly) \_\_\_\_\_, and the capital goods satisfy them \_\_\_\_\_.

5. The income individuals receive from supplying land or natural resources is (interest, rental) \_\_\_\_\_ income, whereas the income received from supplying capital goods is \_\_\_\_\_ income. The income received by individuals who supply labor is (wage, profit) \_\_\_\_\_ income; the income received from entrepreneurial ability is \_\_\_\_\_ income.

6. Economics is the social science concerned with the problem of using (unlimited, scarce) \_\_\_\_\_ resources to attain the maximum fulfillment of society's \_\_\_\_\_ economic wants.

7. Economic efficiency requires full (employment, allocation) \_\_\_\_\_ so that all available resources can be used and that there be full (production, distribution) \_\_\_\_\_ so that the employed resources contribute to the maximum satisfaction of material wants.

8. Full production implies that two types of efficiency are achieved: Resources are devoted to the production of the mix of goods and services society most wants, or there is (allocative, productive) \_\_\_\_\_ efficiency, and the goods and services will be produced in the least costly way, or there will be \_\_\_\_\_ efficiency.

9. When a production possibilities table or curve is constructed, four assumptions are made:

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

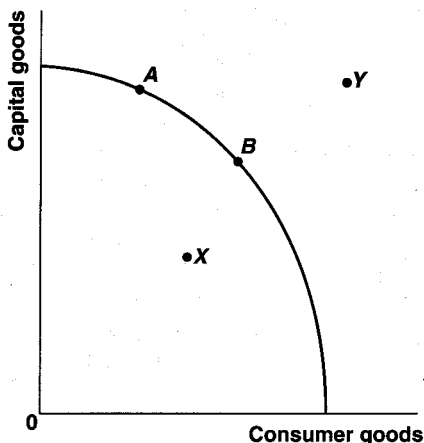
10. In a two-product world, the quantity of the other good or service an economy must give up to produce more housing is the opportunity (benefit, cost) \_\_\_\_\_ of producing the additional housing.

11. The law of increasing opportunity costs explains why the production possibilities curve is (convex, concave) \_\_\_\_\_ from the origin. The economic rationale for the law is that economic resources (are, are not) \_\_\_\_\_ completely adaptable to alternative uses.

12. Allocative efficiency is determined by assessing the marginal costs and benefits of the output from the allocation of resources to production.

- a. The marginal cost curve for a product rises because of increasing (satisfaction, opportunity costs) \_\_\_\_\_, and the marginal benefit curve falls because of less \_\_\_\_\_ from the additional consumption of a product.
- b. When the marginal benefit is greater than the marginal cost, there will be (over, under) \_\_\_\_\_ allocation of resources to the production of a product, but when the marginal cost is greater than the marginal benefit, there will be an \_\_\_\_\_-allocation.
- c. Optimal allocation of resources occurs when the marginal costs of the product output are (greater than, less than, equal to) \_\_\_\_\_ the marginal benefits.

13. Following is a production possibilities curve for capital goods and consumer goods.



- a. If the economy moves from point A to point B, it will produce (more, fewer) \_\_\_\_\_ capital goods and (more, fewer) \_\_\_\_\_ consumer goods.
- b. If the economy is producing at point X, some resources in the economy are either (not available, unemployed) \_\_\_\_\_ or (underemployed, overemployed) \_\_\_\_\_.
- c. If the economy moves from point X to point B (more, fewer) \_\_\_\_\_ capital goods and (more, fewer) \_\_\_\_\_ consumer goods will be produced.
- d. If the economy is to produce at point Y, there must be (unemployment, economic growth) \_\_\_\_\_. This can occur because of a resource supply (decrease, increase) \_\_\_\_\_ or a technological (decline, improvement) \_\_\_\_\_.

14. Technological advances can shift a nation's production possibilities curve (inward, outward) \_\_\_\_\_ because the effects lead to (economic growth, unemployment) \_\_\_\_\_.

15. The more an economy consumes its current production, the (more, less) \_\_\_\_\_ it will be capable of producing in future years if other things are equal.

16. International specialization and trade enable a nation to obtain (more, less) \_\_\_\_\_ of a desired good at \_\_\_\_\_ sacrifice of some other good. The output gains from greater international specialization and trade are the equivalent to economic (growth, decline) \_\_\_\_\_.

17. The institutional arrangements and coordinating mechanisms used to respond to the economic problem are called (*laissez-faire capitalism*, an economic system) \_\_\_\_\_.

18. In capitalism, property resources are primarily (publicly, privately) \_\_\_\_\_ owned. The means used to direct and coordinate economic activity (is central planning, are markets and prices) \_\_\_\_\_.
19. In a command economy, property resources are primarily (publicly, privately) \_\_\_\_\_ owned. The coordinating device(s) in this economic system (is central planning, are markets and prices) \_\_\_\_\_.
20. In the circular flow model,
- Households are buyers and businesses are sellers in (product, resource) \_\_\_\_\_ markets, and businesses are buyers and households are sellers in \_\_\_\_\_ markets.
  - The flow of economic resources and finished goods and services is the (money, real) \_\_\_\_\_ flow, and the flow of income and expenditures is the \_\_\_\_\_ flow.

#### ■ TRUE-FALSE QUESTIONS

Circle *T* if the statement is true, *F* if it is false.

- The conflict between the scarce economic wants of society and its unlimited economic resources gives rise to the economizing problem. **T F**
- The wants with which economics is concerned include only those wants that can be satisfied by goods and services. **T F**
- Money is a resource and is classified as "capital." **T F**
- From the economist's perspective, investment refers to the production and purchase of capital goods. **T F**
- The payment to entrepreneurial ability is interest income. **T F**
- Resources are scarce because society's material wants are unlimited and productive resources are limited. **T F**
- Economic efficiency requires that there be both full employment of resources and full production. **T F**
- Allocative efficiency means that goods and services are being produced by society in the least costly way. **T F**
- Only allocative efficiency is necessary for there to be full production. **T F**
- The opportunity cost of producing antipollution devices is the other goods and services the economy is unable to produce because it has decided to produce these devices. **T F**
- The opportunity cost of producing a good tends to increase as more of it is produced because resources less suitable to its production must be employed. **T F**
- Drawing a production possibilities curve concave to the origin is the geometric way of stating the law of increasing opportunity costs. **T F**
- Economic rationale for the law of increasing opportunity cost is that economic resources are fully adaptable to alternative uses. **T F**
- Allocative efficiency is determined by assessing the marginal costs and benefits of the output from the allocation of resources to production. **T F**
- The marginal-cost curve for a product rises because of increasing satisfaction from the consumption of the product. **T F**
- Given full employment and full production, it is not possible for an economy capable of producing just two goods to increase its production of both at any one point in time. **T F**
- Economic growth means an increase in the production of goods and services, and is shown by a movement of the production possibilities curve outward and to the right. **T F**
- The more capital goods an economy produces today, the greater will be the total output of all goods it can produce in the future, other things being equal. **T F**
- International specialization and trade permit an economy to overcome the limits imposed by domestic production possibilities and have the same effect on the economy as having more and better resources. **T F**
- The elimination of widespread discrimination based on race, ethnicity, or religion in an economy would move it from a point inside its production possibilities curve toward a point on its curve. **T F**
- Pure capitalism is also called *laissez-faire* capitalism. **T F**
- A command economy is characterized by the private ownership of resources and the use of markets and prices to coordinate and direct economic activity. **T F**
- Russia and most nations in Eastern Europe have been transforming their economies from a command to market system since the demise of the former Soviet Union. **T F**
- In the circular flow model, households function on the buying side of the resource and product markets. **T F**
- In the circular flow model, there is a *real flow* of economic resources and finished goods and services and a *money flow* of income and consumption expenditures. **T F**

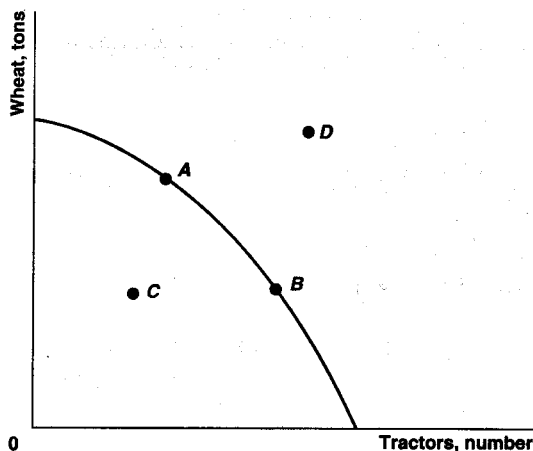
#### ■ MULTIPLE-CHOICE QUESTIONS

Circle the letter that corresponds to the best answer.

- Which is the correct match of an economic resource and payment for that resource?
  - land and wages

- (b) labor and interest income
  - (c) capital and rental income
  - (d) entrepreneurial ability and profit
2. An "innovator" is defined as an entrepreneur who
- (a) makes basic policy decisions in a business firm
  - (b) combines factors of production to produce a good or service
  - (c) invents a new product or process for producing a product
  - (d) introduces new products on the market or employs a new method to produce a product
3. An economy is efficient when it has achieved
- (a) full employment
  - (b) full production
  - (c) either full employment or full production
  - (d) both full employment and full production
4. Allocative and productive efficiency are conditions that best characterize
- (a) full employment
  - (b) full production
  - (c) traditional economies
  - (d) command economies
5. When a production possibilities schedule is written (or a production possibilities curve is drawn) in this chapter, four assumptions are made. Which of the following is one of those assumptions?
- (a) More than two products are produced.
  - (b) The state of technology changes.
  - (c) The economy has both full employment and full production.
  - (d) The quantities of all resources available to the economy are variable, not fixed.

Answer Questions 6, 7, 8, and 9 based on the following graph.



6. At point **A** on the production possibilities curve in the above illustration,
- (a) wheat production is inefficient
  - (b) tractor production is inefficient
  - (c) the economy is employing all its resources
  - (d) the economy is not employing all its resources

7. Unemployment and productive inefficiency would best be represented in the graph by point:
- (a) **A**
  - (b) **B**
  - (c) **C**
  - (d) **D**

8. The choice of point **B** over point **A** as the optimal product mix for society would be based on
- (a) productive efficiency
  - (b) full employment of resources
  - (c) the law of increasing opportunity costs
  - (d) a comparison of marginal costs and benefits

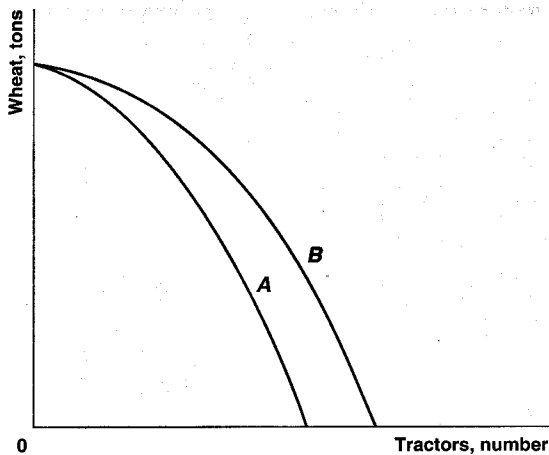
9. Economic growth could be represented by
- (a) a movement from point **A** to point **B**
  - (b) a movement from point **B** to point **A**
  - (c) a shift in the production possibilities curve out to point **C**
  - (d) a shift in the production possibilities curve out to point **D**

10. The production possibilities curve is
- (a) concave
  - (b) convex
  - (c) linear
  - (d) positive

11. What is the economic rationale for the law of increasing opportunity cost?
- (a) Full production and full employment of resources have not been achieved.
  - (b) Economic resources are not completely adaptable to alternative uses.
  - (c) Economic growth is being limited by the pace of technological advancement.
  - (d) An economy's present choice of output is determined by fixed technology and fixed resources.

12. If there is an increase in the resources available within the economy,
- (a) more goods and services will be produced in the economy
  - (b) the economy will be capable of producing more goods and services
  - (c) the standard of living in the economy will rise
  - (d) the technological efficiency of the economy will improve

13. If the production possibilities curve below moves from position **A** to position **B**, then
- (a) the economy has increased the efficiency with which it produces wheat
  - (b) the economy has increased the efficiency with which it produces tractors
  - (c) the economy has put previously idle resources to work
  - (d) the economy has gone from full employment to less than full employment



14. Which would be the best example of allocative efficiency? When society devoted resources to the production of
- slide rules instead of handheld calculators
  - horse-drawn carriages instead of automobiles
  - computers with word processors instead of typewriters
  - long-playing records instead of compact discs
15. Which situation would most likely shift the production possibilities curve for a nation in an outward direction?
- deterioration in product quality
  - reductions in the supply of resources
  - increases in technological advances
  - rising levels of discrimination
16. The opportunity cost of a new public stadium is the
- money cost of hiring guards and staff for the new stadium
  - cost of constructing the new stadium in a future year
  - change in the real estate tax rate to pay off the new stadium
  - other goods and services that must be sacrificed to construct the new stadium
17. Which situation would most likely cause a nation's production possibilities curve to shift inward?
- investing more resources in new plants and equipment
  - eliminating discrimination based on race and ethnic background
  - increasing international trade or incurring a trade deficit
  - going to war with another nation and suffering a major defeat
18. The combination of products in society's production possibilities table which is the most valued or optimal is determined
- at the midpoint of the production possibilities table
  - at the endpoint of the production possibilities table
  - where the marginal benefits equal marginal costs
  - where the opportunity costs are maximized
19. The underallocation of resources by society to the production of a product means that the
- marginal benefit is greater than the marginal cost
  - marginal benefit is less than the marginal cost
  - opportunity cost of production is rising
  - consumption of the product is falling
- Answer Questions 20, 21, and 22 on the basis of the data given in the following production possibilities table.
- |                | Production possibilities (alternatives) |     |     |     |     |     |
|----------------|---|-----|-----|-----|-----|-----|
|                | A                                       | B   | C   | D   | E   | F   |
| Capital goods  | 100                                     | 95  | 85  | 70  | 50  | 0   |
| Consumer goods | 0                                       | 100 | 180 | 240 | 280 | 300 |
20. The choice of alternative B compared with alternative D would tend to promote
- a slower rate of economic growth
  - a faster rate of economic growth
  - increased consumption in the present
  - central economic planning
21. If the economy is producing at production alternative D, the opportunity cost of 40 more units of consumer goods is about
- 5 units of capital goods
  - 10 units of capital goods
  - 15 units of capital goods
  - 20 units of capital goods
22. In the table, the law of increasing opportunity costs is suggested by the fact that
- greater and greater quantities of consumer goods must be given up to get more capital goods
  - smaller and smaller quantities of consumer goods must be given up to get more capital goods
  - capital goods are relatively more scarce than consumer goods
  - the production possibilities curve will eventually shift outward as the economy expands
23. The private ownership of property resources and use of markets and prices to direct and coordinate economic activity is characteristic of
- capitalism
  - communism
  - socialism
  - command economy
24. The two kinds of markets found in the circular flow model are
- real and money markets
  - real and socialist markets
  - money and command markets
  - product and resource markets
25. In the circular flow model, businesses
- buy products and resources
  - sell products and resources
  - buy products and sell resources
  - sell products and buy resources

■ PROBLEMS

1. Following is a list of resources. Indicate in the space to the right of each whether the resource is land (LD), capital (C), labor (LR), entrepreneurial ability (EA), or some combinations of these resources.

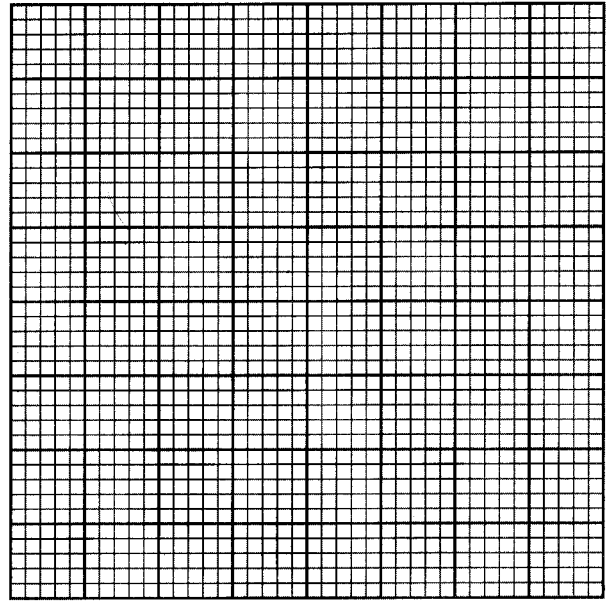
- a. Fishing grounds in the North Atlantic \_\_\_\_\_
- b. A cash register in a retail store \_\_\_\_\_
- c. Uranium deposits in Canada \_\_\_\_\_
- d. An irrigation ditch in Nebraska \_\_\_\_\_
- e. Bill Gates in his work in starting Microsoft \_\_\_\_\_
- f. The oxygen breathed by human beings \_\_\_\_\_
- g. An IBM plant in Rochester, Minnesota \_\_\_\_\_
- h. The food on the shelf of a grocery store \_\_\_\_\_
- i. A robot in an auto plant \_\_\_\_\_
- j. A person who creates new computer software and uses it to start a successful business \_\_\_\_\_
- k. A carpenter building a house \_\_\_\_\_

2. Following is a production possibilities table for two commodities, wheat and automobiles. The table is constructed using the usual assumptions. Wheat is measured in units of 100,000 bushels and automobiles in units of 100,000.

Combination	Wheat	Automobiles
A	0	7
B	7	6
C	13	5
D	18	4
E	22	3
F	25	2
G	27	1
H	28	0

- a. Follow the general rules for making graphs (see the appendix to Chapter 1); plot the data from the table on the graph in the next column to obtain a production possibilities curve. Place wheat on the vertical axis and automobiles on the horizontal axis.
- b. Fill in the following table showing the opportunity cost per unit of producing the 1st through the 7th automobile.

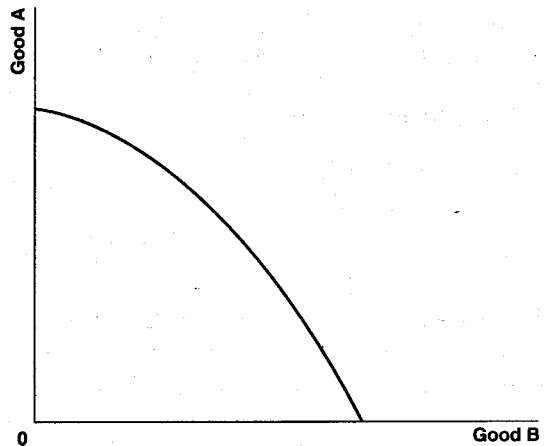
Automobiles	Cost of production
1st	_____
2d	_____
3d	_____
4th	_____
5th	_____
6th	_____
7th	_____



0

3. The following graph is a production possibilities curve. Draw on this graph

- a. a production possibilities curve that indicates greater efficiency in the production of good A
- b. a production possibilities curve that indicates greater efficiency in the production of good B
- c. a production possibilities curve that indicates an increase in the resources available to the economy



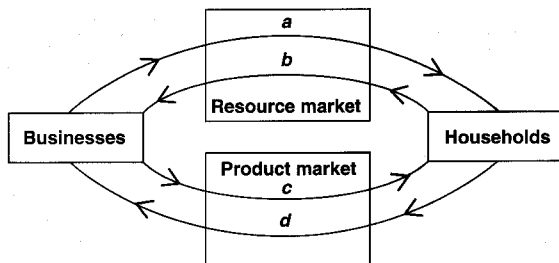
4. Following is a list of 12 economic goods. Indicate in the space to the right of each good whether it is a consumer good (CON), a capital good (CAP), or that it depends (DEP) on who is using it and for what purpose.

- a. An automobile \_\_\_\_\_
- b. A tractor \_\_\_\_\_
- c. A taxicab \_\_\_\_\_
- d. A house \_\_\_\_\_
- e. A factory building \_\_\_\_\_



- f. An office building \_\_\_\_\_
- g. An ironing board \_\_\_\_\_
- h. A refrigerator \_\_\_\_\_
- i. A telephone \_\_\_\_\_
- j. A quart of a soft drink \_\_\_\_\_
- k. A cash register \_\_\_\_\_
- l. A screwdriver \_\_\_\_\_

5. In the circular flow diagram below, the upper pair of flows (*a* and *b*) represents the resource market and the lower pair (*c* and *d*) the product market.



Supply labels or explanations for each of the four flows:

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

■ SHORT ANSWER AND ESSAY QUESTIONS

1. Explain what the term "economizing problem" means. Why are resources scarce?
2. In what sense are economic wants satiable or insatiable?
3. What are the four economic resources? How is each resource defined?
4. What is the income each economic resource earns?
5. When is a society economically efficient? What does "full production" mean, and how does it differ from "full employment"?
6. Explain why full production implies both allocative efficiency and productive efficiency.
7. What four assumptions are made in drawing a production possibilities curve or schedule?
8. What is opportunity cost? Give an example.
9. What is the law of increasing opportunity cost? Why do costs increase?
10. What determines the optimal product mix for society's production possibilities?

11. How can unemployment be illustrated with the production possibilities curve?
12. What will be the effect of increasing resource supplies on production possibilities?
13. Describe how technological advances will affect the production possibilities curve.
14. Explain the tradeoff between goods for the present and goods for the future and the effect of this tradeoff on economic growth.
15. What qualification does international specialization and trade make for the interpretation of production possibilities?
16. Give examples of how tradeoffs and opportunity costs can be illustrated by the production possibilities curve.
17. Give examples of shifts in the production possibilities curve.
18. The market system and the command system differ in two important ways. Compare and contrast the two economic systems.
19. In the circular flow model, what are the two markets? What roles do households play and what roles do businesses play in each market?
20. In the circular flow model, what are the income flows? What are the expenditure flows?