

Key

Intro to Economics

Why Study Economics?

Every year, the world becomes increasingly more interested in the study of economics. But the questions exist, what is the study of economics, and why are we so obsessed with it? At its simplest, **Economics** is the study of how people seek to satisfy their needs and wants by making *choices*. Since it is impossible to fulfill ALL wants and needs, choices have to be made. These choices can be made by individuals, groups (businesses), or governments. Therefore, economists will study each of these sections independently, in groups called *Personal Finance, Micro Economics, and Macro Economics*.

To look at the world economically, we can focus on the decisions that people make. You, for example, have to decide what to do with your time – go to a movie or study for a test. Businesses have to decide how many people to employ and how much to produce. A city government may have to decide whether to spend its budget to build a school or a park. These decisions will reflect the satisfaction of a want or need.

Directions: In the table below, list as many examples of wants and needs that you can think of.

Needs	Wants
food Shelter water	I phone makeup computers
Anything needed for survival	

Needs are necessary for Survival. Wants are desired but not necessary for Survival.

Scarcity

Living in a first-world country can make the concept of scarcity hard to understand. If store shelves are filled with goods, and most people have jobs, then it doesn't seem that anything is 'scarce.' However, all goods and services produced are scarce. Scarcity implies limited quantities of resources to meet unlimited wants. Although there may be a large quantity of a certain good or service, at some point it will become limited (run out). Therefore, all goods and services are scarce. At its core, economics is about solving the problem of scarcity.

Scarcity vs Shortage

A shortage is not the same as scarcity. A shortage occurs when producers will not or cannot offer goods or services at the current prices. Essentially, shortages happen when consumers do not have a certain good or service available at the current moment. Shortages can be short-term or long-term.

An example of a short-term shortage would be during the release of the newest iPhone, consumers will have a hard time getting the new phone in the first few months, and usually have to wait for one to be shipped because the store will not have any on hand. However, after a few months, consumers can walk into almost any electronics store and purchase the same phone. In contrast, a long-term shortage could last for years, due to issues such as droughts or wars.

Scarcity, on the other hand, will always exist because our needs and wants will always be greater than our resource supply.



Using the cartoon above, answer questions about scarcity and shortages.

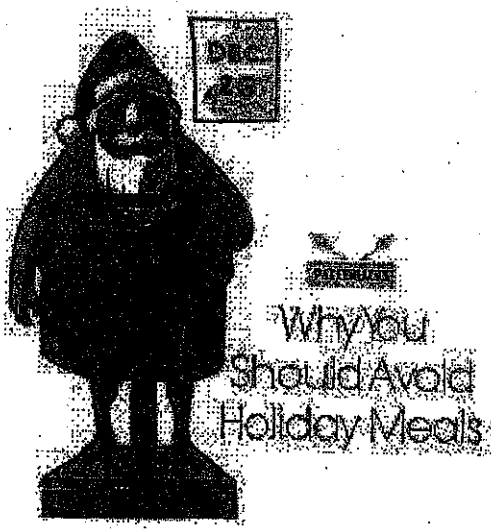
1. What point do you think the author is making? Shortages only exist because of inadequate supply of guns/labor.
2. What is the shortage the hunter is referring to? The Native American? There is a shortage of guns/labor (scouts)
3. If there are fewer living buffaloes left to hunt, is this considered a shortage? Scarcity? Explain. Buffalo - a natural resource are always scarce. - They can become more scarce.

Trade-offs

Have you ever had to make a decision about spending your money today versus tomorrow? For example, you might ask yourself, 'Should I go out to dinner tonight, or should I rather save my money so I can go to the movies tomorrow?' You probably make decisions like this several times a day without even realizing it. Since your resources such as time and money are limited, you must choose how to best allocate them by making some trade-offs. Trade-offs are the alternatives that we sacrifice when we make a decision.

Individuals make decisions everyday about how to allocate their resources. Such as whether to spend time working on a paper, or spending time playing a video game. Likewise, businesses have to decide how to best use their resources. For example, if a farmer decides to use his land to plant broccoli, he is giving up his chance to plant other crops on that portion of the land. Lastly, governments have to decide where to spend their money, in the military or on consumer goods. We will discuss this more later.

Gov. makes purchases as well from private businesses.



1. What is the message of this cartoon?

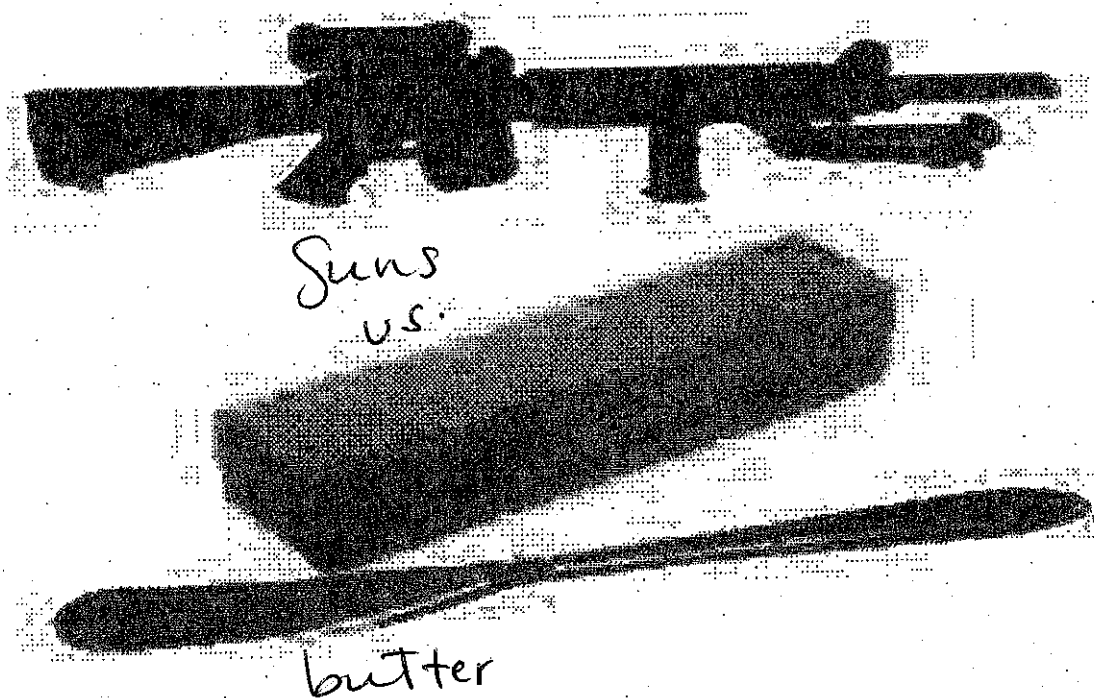
Trade off of a good holiday meal is extra pounds!

2. How does this relate to trade-offs?

Eat more = ↑ weight

3. Imagine that you are going to buy a car. List some of the trade-offs involved with such a purchase. Why are these trade-offs?

- Paying tuition
- ↑ car payment for extra features such as power windows
- new car could equal vaca.
- car vs. bike may mean higher weight too!



1. What two items are pictured above?

Guns vs. butter

2. How does this image relate to economics?

In economics, gov. makes choices/trade-offs too about purchases. Guns vs. butter

3. What do you think each item represents? Give other examples.

Guns = mil. goods

Butter = consumer goods

Can't buy unlimited quantities of each.

Production Possibilities Curve

The concept of **opportunity cost** and associated **tradeoffs** may be illustrated with a picture.

Production Possibilities Curve – a graph that shows alternative ways to use an economy's resources – does not show consumer satisfaction. It is a model of a macro economy used to analyze the production decisions in the economy and the problem of scarcity.

Production Possibilities Frontier – the line on a production possibilities graph that shows the maximum possible output

Efficiency – using resources in such a way as to maximize the production of goods and services

Underutilization – using fewer resources than an economy is capable of using

Cost – to an economist, the alternative that is given up because of a decision – the opportunity cost

Sunk Cost – a cost that cannot be avoided because they have already been incurred

Growth – an economy wants to move the production possibilities curve to the right. It can do so only with growth.

Reasons for Growth

1. Accumulation of capital
2. Technological advances
3. Increase in population – immigrants, birth rates increase
4. Available land or improvements to land
↳ how could we ↑ land.

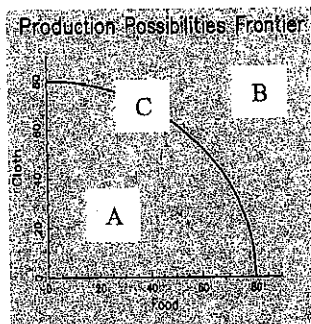
Reasons for Decline

1. Decrease in population – disease, catastrophe, war, birth rates decline
2. Loss of land – war or natural disaster
3. Decrease in production due to aging population, more uneducated population, less healthy population

*unattainable
- outside
of
curve*

Four Assumptions

1. **Two Goods:** Resources are used to produce one or both of only two goods. This is a simplifying assumption that makes it easy to display production alternatives using graphs. More than two goods could be analyzed using advanced mathematics.
2. **Fixed Resources:** The quantities of land, labor, capital, and entrepreneurship resources do not change. This is a reasonable assumption, but it can be relaxed to analyze the consequences of changes in these resources.
3. **Fixed Technology:** The information and knowledge that society has about the production of goods and services is fixed. This is another reasonable assumption that can be relaxed to analyze the effects of technology changes.
4. **Technical Efficiency:** Resources are used in a technically efficient way. That is, the maximum possible production is obtained from the resource inputs.



- **Points on the PPC (Point C)** show efficient use of resources – maximum output. **Full employment**
- **Points beyond the PPC (Point B)** are not attainable given the resource constraint – only after **economic growth**
- **Points below the PPF (Point A)** are feasible, but inefficient. **Unemployment**

Slope of the line: Opportunity cost is indicated by the negative slope of the production possibilities curve (or frontier). As more of one good is produced, less of the other goods is produced. This production reduction is opportunity cost.

Curve of the line: The curve indicates that goods do not change in equal proportions. As the production of one good goes up, the rate of the other decreases by an increasing rate. This is the **Law of Increasing Costs**. Rarely there might be a **straight line**. This means that production changes in equal proportions. As production for one product increases, the other decreases at the same rate. The rate of change is constant. Examples: black shoes vs. red shoes; sausage pizza vs. hamburger pizza; hours of study vs. hours of work. Law of Increasing Costs does not apply to straight lines.

Reading:

Just some interesting facts regarding why the curve could shift left:

FACTBOX-Five most expensive natural disasters
Wed May 3, 2006 8:00 AM ET

May 3, (Reuters) - The following are the world's five biggest natural disasters in terms of insured losses, calculated in 2005 dollars.

August 2005 -- Hurricane Katrina hit Florida and then slammed into the Gulf Coast, flooding New Orleans and sending a 28-foot-high (8.5-metre-high) storm surge into Mississippi and Alabama. \$45 billion.

August 1992 -- Hurricane Andrew battered Florida and the Bahamas. \$22.3 billion.

January 1994 -- The Northridge, California earthquake, measuring 6.7 on the Richter scale, toppled buildings in southern California. \$18.5 billion.

September 2004 -- Hurricane Ivan rips through the Caribbean, battering oil rigs in the Gulf of Mexico and then hitting Florida, one of four hurricanes to crash into the state that year. \$11.7 billion.

September 2005 -- Following on the heels of Katrina, Hurricane Rita hits the Texas coast near Beaumont. \$10 billion. It is followed in October by Hurricane Wilma, another \$10 billion storm that cuts across southern Florida, including Miami, Fort Lauderdale and West Palm Beach.

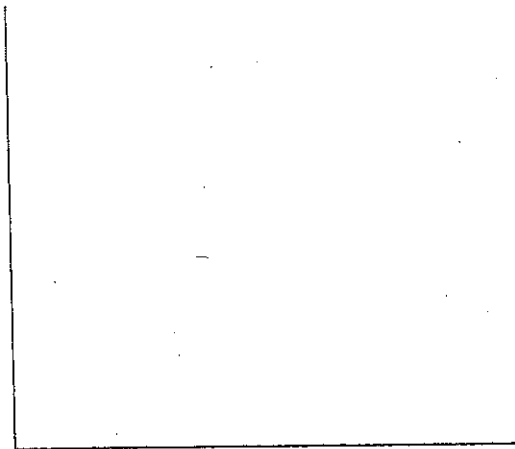
Eight of the 11 most expensive disasters in history, at least in terms of insured losses, have occurred along the U.S. Gulf Coast in the past four years.

PPC Practice

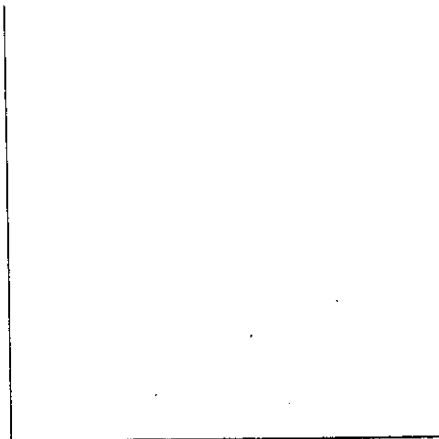
1. Jackie land is known for the production of Cupcakes and Robots. The following is a PPT for Jackie land:

	A	B	C	D	E	F	G	H	I	J
Cupcakes:	0	2	6	10	14	18	22	26	28	30
Robots:	30	28	26	22	18	14	10	6	2	0

- a) Draw and label (each axis and each point). Put cupcakes on the Y
b) Indicate on the graph with Point K where **inefficient** is.
c) Indicate on graph with Point L where unattainable is
Note that points A – J indicate **efficient** uses of resources.



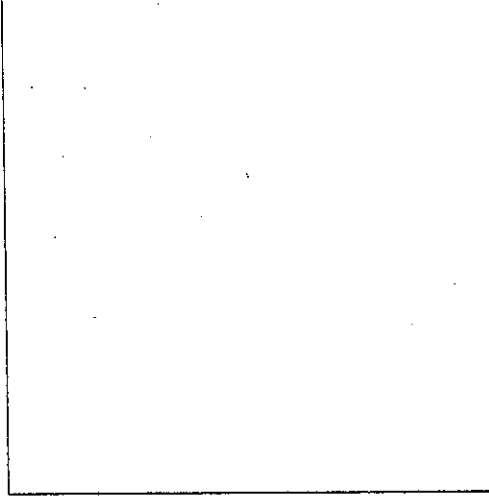
2. Draw a second Production Possibilities Graph with two frontiers.
a. Draw arrows to show growth
b. List reasons for growth:



3. Draw a third Production Possibilities Graph with two frontiers.

a. Draw arrows to show decline

b. List reasons for decline:



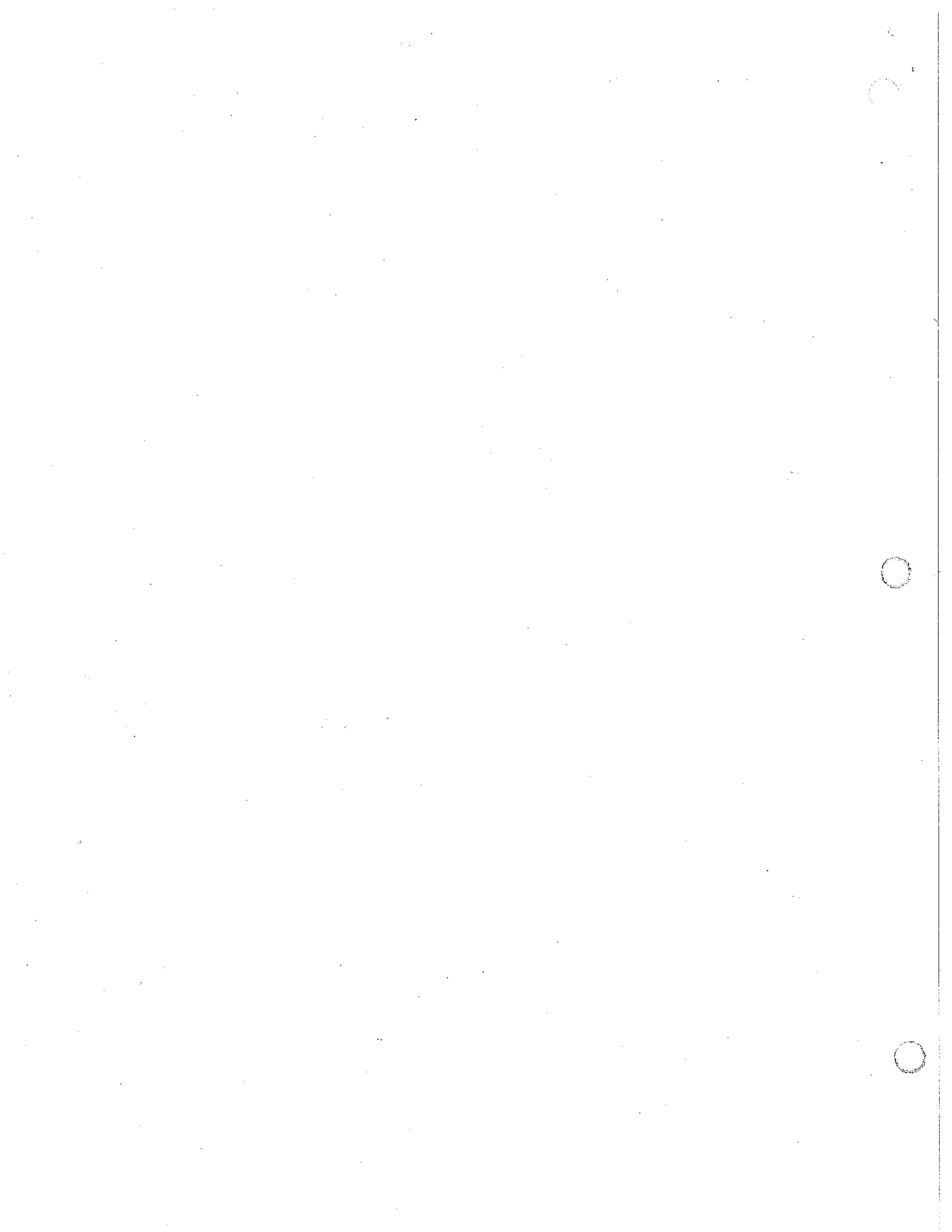
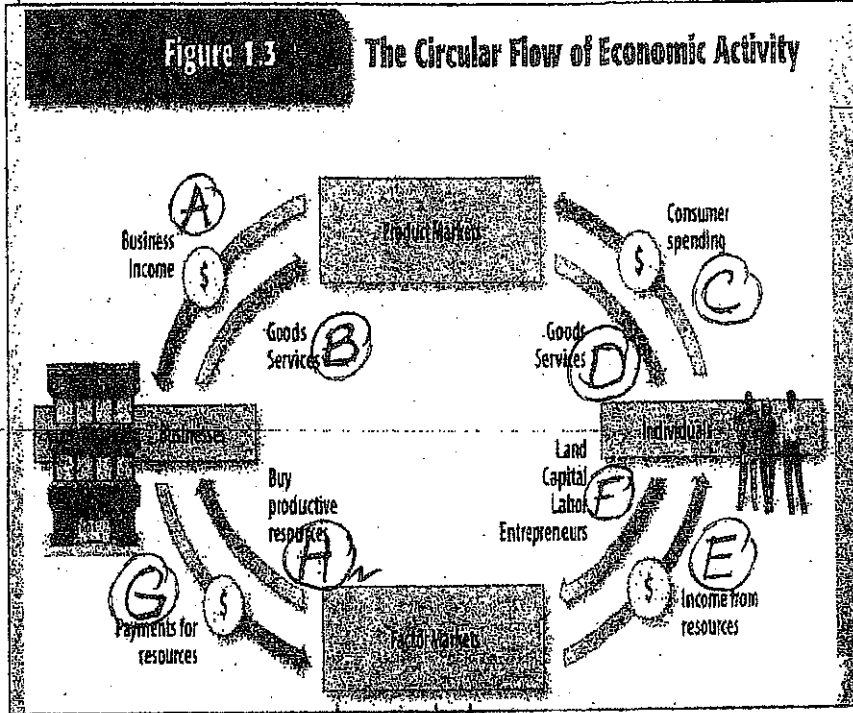


Figure 1.3

The Circular Flow of Economic Activity



30
1/5
21

land, labor,
Capital

Next to each statement, put the letter that identifies which part of the circular flow model the action belongs.

1. Henry paints houses as his summer job. F - labor
2. Bonnie's Beauty Parlor hires another hairdresser. A₂
3. Olivia chooses a beautiful sweater for her grandmother's Christmas gift.
D
4. General Motors produces SUV's for sale to consumers.
B
5. Jorge receives income from rental properties. E
6. David pays for a ticket to a rock concert. C
7. Abs of Steel Fitness Center pays personal trainers each Friday.
G - paid labor
8. The Georgia Bulldogs receive money from season ticket holders.
A

The True Cost of a DVD

K

You decide to buy a new DVD of a popular movie at a price of \$20.

There are other things you could do with that \$20. You could buy pizzas at a price of \$10 per pizza. You could also buy books at a price of \$10 per book. Or, you could save some or all of the \$20.

In the chart below, indicate the six combinations of pizzas, books, and savings that you could buy with the \$20 you plan to spend on the DVD.

Combination	Pizzas		Books		Savings		Total Cost
	Price of one Unit	Units Bought	Price of one Unit	Units Bought	Price of one Unit	Units Bought	
A	\$10	2	\$10	0	\$10	0	\$20
B	\$10	1	\$10	1	\$10	0	\$20
C	\$10	0	\$10	2	\$10	0	\$20
D	\$10	0	\$10	0	\$10	2	\$20
<u>E</u>	\$10	1	\$10	0	\$10	1	\$20
F	\$10	0	\$10	1	\$10	1	\$20

1. Circle the letter of the one combination above that is most appealing to you. This combination of pizzas, books and savings represents the true cost to you of buying the DVD. This sacrifice is called the opportunity cost of buying the DVD because it represents the highest valued alternative to you.

2. Do you think all other people would choose the same combination that you chose?

no

3. Is the true cost of buying a \$20 DVD the same for all individuals? Why?

no, everyone values things diff

4. Make up another example of the opportunity cost of buying some particular good or service.

buy a car, can't go on vacation.

5. Make up an example of the opportunity cost of devoting two hours to watching a movie on your television.

study time.

5

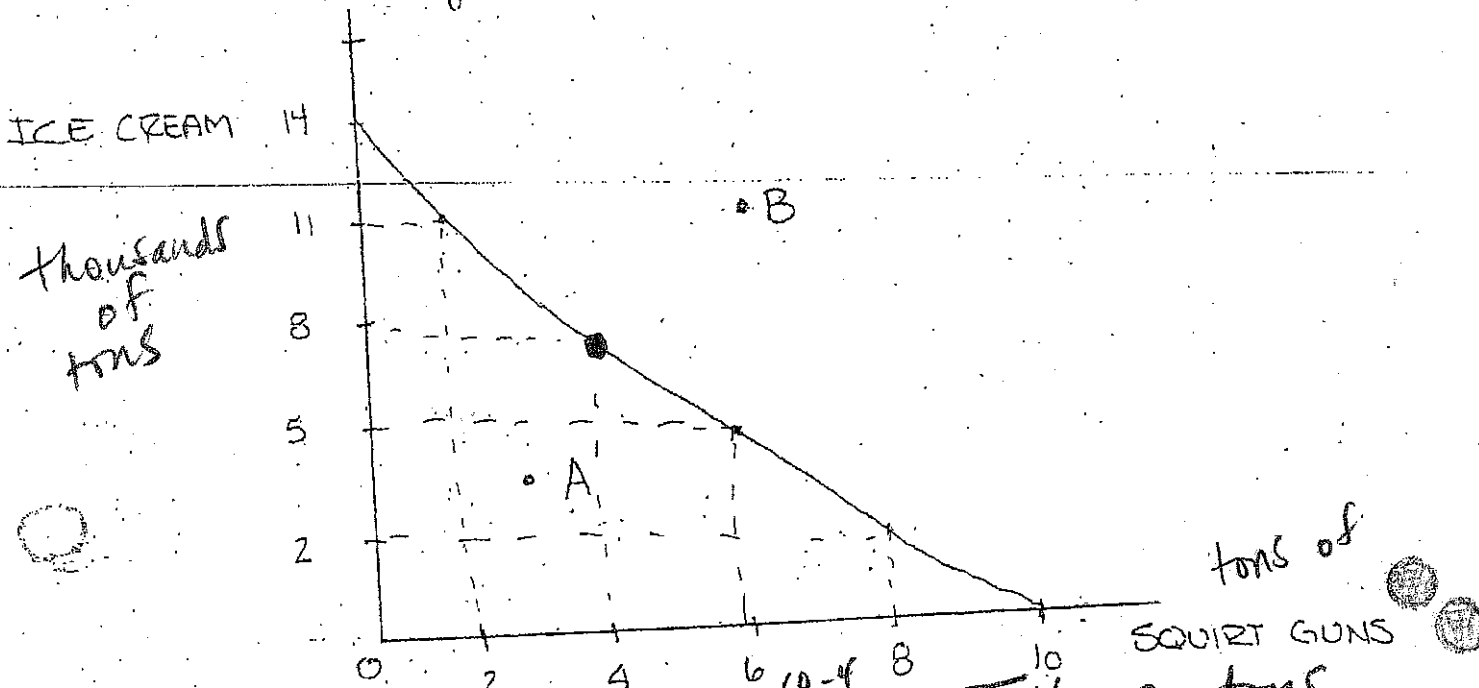
PRODUCTION POSSIBILITIES CURVE

ICE CREAM

14,000 (tons)
11,000
8,000 } 3
5,000 } 3
2,000 } 2
0

SQUIRT GUNS

0
2,000
4,000 } 2
6,000 } 2
8,000 } 2
10,000 } 2



- The maximum amount of ice cream that can be produced is 14,000 tons
- The maximum amount of squirt guns that can be produced is 10,000
- If 5,000 tons of ice cream are produced, how many squirt guns can be produced? 6,000
- If 8,000 tons of ice cream are produced, how many squirt guns can be produced? 4,000
- What is the opportunity cost, in tons of squirt guns, when 8,000 tons of ice cream are produced? 6,000 Squirt guns
- What does point A mean? Inefficiency
- What does point B mean? unattainable

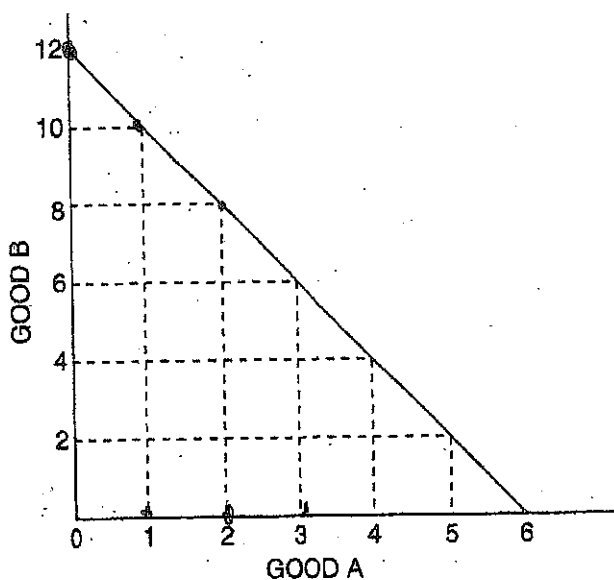
Scarcity, Opportunity Cost and Production Possibilities Curves

Scarcity necessitates choice. Consuming or producing more of one thing means consuming or producing less of something else. The opportunity cost of using scarce resources for one thing instead of something else is often represented in graphical form as a *production possibilities curve*.

Part A

Use Figures 2.1 and 2.2 to answer these questions. Write the correct answer on the answer blanks, or underline the correct answer in parentheses.

Figure 2.1
Production Possibilities Curve 1

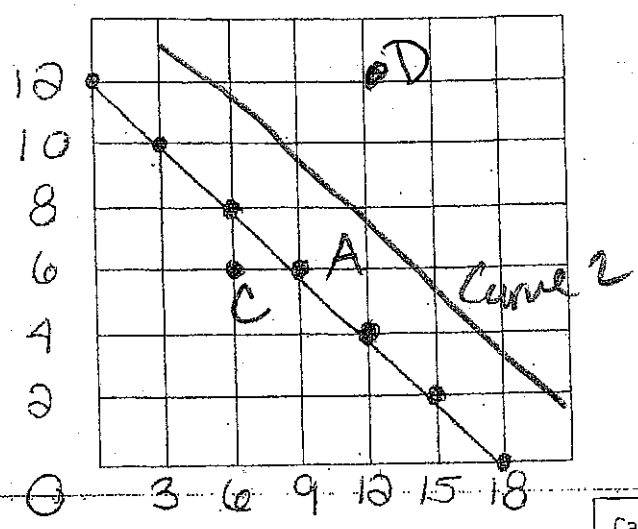


Zero = 1 for 1
constant for every
↑ it remains
the same cost
increasing costs -
happens when
you could have
been producing
something else
more efficiently
opp. cost rises
with
each
unit of
new prod.
law of
decreasing
costs

1. If the economy represented by Figure 2.1 is presently producing 12 units of Good B and zero units of Good A:
 - (A) The opportunity cost of increasing production of Good A from zero units to one unit is the loss of 2 unit(s) of Good B.
 - (B) The opportunity cost of increasing production of Good A from one unit to two units is the loss of 2 unit(s) of Good B.
 - (C) The opportunity cost of increasing production of Good A from two units to three units is the loss of 2 unit(s) of Good B.
 - (D) This is an example of (constant / increasing / decreasing / zero) opportunity cost per unit for Good A.

Adapted from Phillip Saunders, *Introduction to Microeconomics: Student Workbook*, 18th ed. (Bloomington, Ind., 1998). Copyright ©1998 Phillip Saunders. All rights reserved.

CD Players
(In thousands)

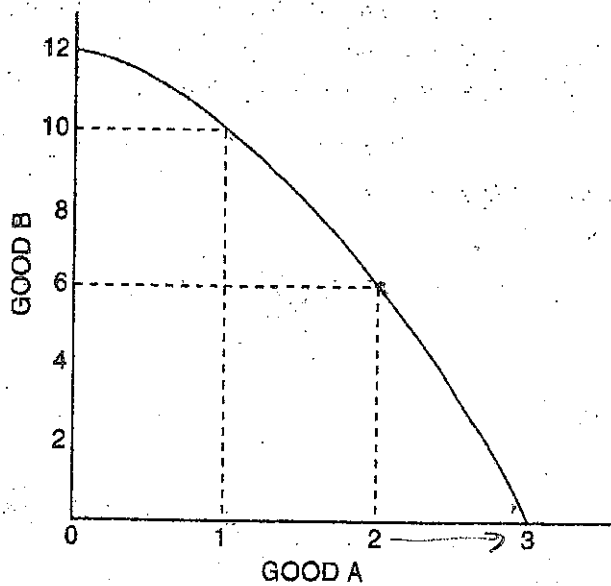


Car Stereos
(In thousands)

8 | 6 - 19
6 | 9 - 15
4 | 12 - 16
2 | 15 - 17
 d up

- What information does the graph present?
Opportunity Cost or PPC
- What happens as the production of CD players increases?
Opp cost of stereos goes up at constant rate
- How many CD players could the company produce if it chose to produce 6,000 car stereos?
8,000 CD Players
- How many car stereos could the company produce if it chose to produce 10,000 CD players?
3,000 Stereos
- Label the point where the company is making 6,000 of each unit point "C". Explain why the company might do this.
They are not using resources efficiently - point of inefficiency
- Label the point where the company is making 12,000 of each sound system point "D". Could the company produce at this point? Why or why not?
No, unattainable at given time with given resources.
- If the company wanted to produce the maximum number of total sound systems, how many of each should it produce?
*Total 17,000
2,000 CD Players
15,000 Car Stereos*
- Suppose the company is currently producing at point A. What is the opportunity cost of increasing production of CD Players from 6,000 to 8,000 in terms of Car Stereos?
3,000 Stereos
- Suppose new technology was created that increased production of car stereos and CD players. Draw and label what the new PPC may look like, and label it "Curve 2".
Growth to the right. PPC - over 17

Figure 2.2
Production Possibilities Curve 2



Bowed outward

Increasing costs

2. If the economy represented in Figure 2.2 is presently producing 12 units of Good B and zero units of Good A:
- (A) The opportunity cost of increasing production of Good A from zero units to one unit is the loss of 2 unit(s) of Good B.
 - (B) The opportunity cost of increasing production of Good A from one unit to two units is the loss of 4 unit(s) of Good B.
 - (C) The opportunity cost of increasing production of Good A from two units to three units is the loss of 6 unit(s) of Good B.
 - (D) This is an example of (constant / increasing / decreasing / zero) opportunity cost per unit for Good A.

Increasing op cost -
Resources are not perfectly suited for both goods

opportunity

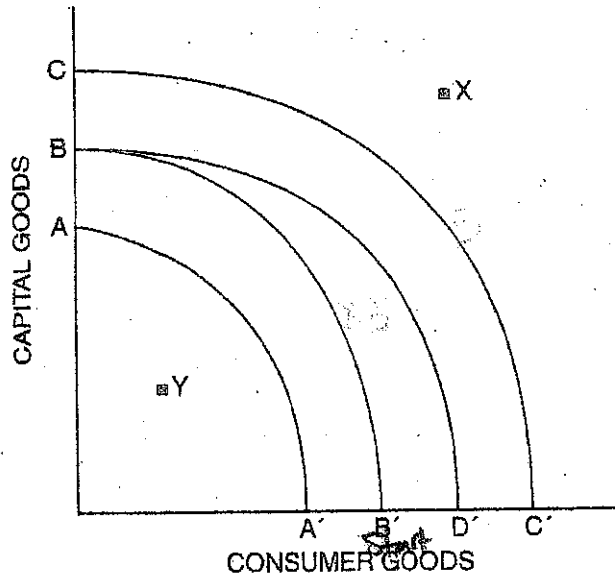
$$\frac{2C = 5P}{2} \\ 1C = 2.5P$$

7B

Part C

Use Figure 2.6 to answer the next five questions. Each question starts with Curve BB' as a country's production possibilities curve.

Figure 2.6
Production Possibilities Curve: Capital Goods and Consumer Goods



- Suppose there is a major technological breakthrough in the consumer-goods industry, and the new technology is widely adopted. Which curve in the diagram would represent the new production possibilities curve? (Indicate the curve you choose with two letters.) ~~DD~~ BD
- Suppose a new government comes into power and forbids the use of automated machinery and modern production techniques in all industries. Which curve in the diagram would represent the new production possibilities curve? (Indicate the curve you choose with two letters.) AA
- Suppose massive new sources of oil and coal are found within the economy, and there are major technological innovations in both industries. Which curve in the diagram would represent the new production possibilities curve? (Indicate the curve you choose with two letters.) CC
- If BB' represents a country's current production possibilities curve, what can you say about a point like X? (Write a brief statement.)
unattainable with current resources
- If BB' represents a country's current production possibilities curve, what can you say about a point like Y? (Write a brief statement.)
operating below operating TC capacity

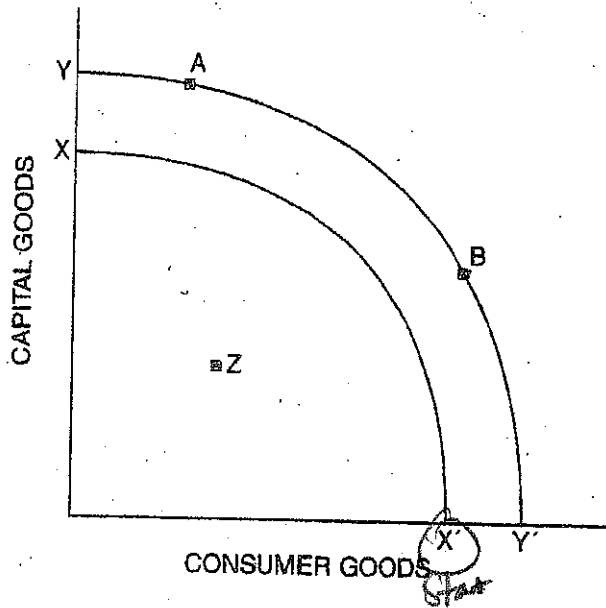
Part D

Use Figure 2.7 to answer the next three questions.



Figure 2.7

Production Possibilities Curve: Capital Goods and Consumer Goods



8. What change could cause the production possibilities curve to shift from the original curve (XX') to the new curve (YY')?

\uparrow pop, \uparrow tech, \uparrow cap, \uparrow land

9. Under what conditions might an economy be operating at Point Z?

war, natural disaster, restricting gov, strike, broken economic system

10. Why might a government implement policy to move the economy from Point B to Point A?

\uparrow prod. cap. goods to \uparrow future prod. levels & GDP.

7E

Production Possibilities Frontier

1) How is economic growth represented in the production possibilities frontier framework?

Can show growth with PPF's over time.
- Show poss. of prod.

2) How are choice and opportunity cost represented in the PPF?

Give up 1 thing for another = opp. cost. Can't produce 100% of everything. Scarcity.

3) Janet can produce either (a) 10 Units of X and 20 Units of Y, or (b) 20 Units of X and 5 Units of Y. What is the cost (to Janet) of producing one unit of X? One Unit of Y?

	X	Y
or	10	20
Diff.	20	5
	10	15

$$10x = 15y$$

$$x = \frac{15}{10}y$$

$$x = 1.5y$$

$$10x = 15y$$

$$\frac{10}{15}x = y$$

$$\frac{2}{3}x = y$$

4) Why does specialization and trade benefit people?

We can specialize in what we are good at producing and trade for what we need etc.

5) Identify 2 things that can shift a PPF outward (to the right)

- ↑ pop
- ↑ tech
- ↑ land
- ↑ capital

6) Give an example of an advance in technology.

New robotic machinery builds cars faster, cheaper, more efficiently.