

Student name: \_\_\_\_\_

Which of the following is not one of the three core economic issues that must be resolved?

how to produce the goods and services we select

what to produce with unlimited resources

who should get the goods and services we produce

what to produce with limited resources

The fundamental problem of economics is

the law of increasing opportunity costs.

the scarcity of resources relative to human wants.

how to get government to operate efficiently.

how to create employment for everyone.

In economics, scarcity means that

a shortage of a particular good will cause the price to fall.

a production possibilities curve cannot accurately represent the trade-off between two goods.

society's desires exceed resources available.

the market mechanism has failed.

Given that resources are scarce,

a "free lunch" is possible, but only for a limited number of people.

opportunity costs are experienced whenever choices are made.

poor countries must make choices, but rich countries with abundant resources do not have to make choices.

some choices involve opportunity costs while other choices do not.

The fact that there are too few resources to satisfy all our wants is attributed to scarcity.

greed.

shortages.

lack of money.

There is no such thing as a free lunch because

the producer must charge something to cover the cost of production.

resources used to produce the lunch could be used to produce other goods and services.

the government must raise taxes to pay for the lunches.

no one would pay for lunch anymore if they could get it for free.

A consequence of the economic problem of scarcity is that

choices must be made about how resources are used.

there is never too much of any good or service produced.

the production of goods and services must be controlled by the government.

the production possibilities curve is bowed outward.

The basic factors of production are

land, labor, money, and capital.

land, labor, money, and inputs.

labor and money.

land, labor, capital, and entrepreneurship.

Factors of production are

scarce in every society.

scarce only in advanced countries.

scarce only in the poorest countries of the world.

unlimited in quantity.

Which of the following is not a factor of production?

The managers that oversee a factory.

Stock shares for Ford Motor company.

The number of people of working-age.

The increased speed employees have gained from performing a job for a while.

Which of the following is *not* a factor of production?

a psychiatrist

\$100,000 cash

a bulldozer

six thousand acres of farmland

With respect to factors of production, which of the following statements is not true?

Factors of production are also known as resources.

To produce any good or service, it is necessary to have factors of production.

Factors of production include land, labor, capital, and entrepreneurship.

Only those resources that are privately owned are counted as factors of production.

Which of the following is the best example of capital?

The water used to make a soft drink.

The workers in a business department.

A barber's chair.

An individual seeking a new, cheaper source for inputs.

Which of the following is the best example of land?

the ethanol refined from corn

a factory that produces new goods and services

the water used to make a soft drink

a barber's chair

Capital, as economists use the term, refers to

the cash needed to start a new business.

the costs of operating a business.

shares of stock issued by businesses.

final goods that are used to produce other goods and services.

Which economist argued that free markets unleashed the "animal spirits" of entrepreneurs, propelling innovation, technology, and growth?

Lord Kelvin

Kenneth Olsen

Irving Fisher

John Maynard Keynes

The role of the entrepreneur in an economy is to  
bring the factors of production together and assume the risk of production.  
work with government planners to determine what goods are produced.  
arrange bank financing for the owners of new businesses.  
ensure full employment of labor.

Economics can be defined as the study of  
for whom resources are allocated to increase efficiency.  
how society spends the income of individuals.  
how scarce resources are allocated.  
how governments allocate scarce resources in all command economies.

Opportunity cost is  
measured only in dollars and cents.  
the total dollar cost to society of producing the goods.  
the difficulty associated with using one good in place of another.  
what is given up in order to get something else.

Opportunity cost may be defined as the  
the most desired goods or services that are forgone in order to obtain something else.  
dollar prices paid for final goods and services.  
dollar cost of producing a particular product.  
difference between wholesale and retail prices.

The opportunity cost of studying for an economics test is

negative because it may improve your grade.

zero because you knew when you registered for the class that studying would be required.

the money you spent on tuition for the class.

the activity that is the best alternative use of your time.

Which of the following is the best example of an opportunity cost?

The value of sales a company receives from selling their product.

The benefits a society gets from the government's funding of a local program.

The work experience a full-time college student could have received had they chosen to work instead of going to school.

The benefits a society gets from the government's funding of a local program.

The "guns versus butter" dilemma that all nations confront is that

guns and butter can be produced using the same resources at the same time.

an increase in national defense implies more sacrifices of civilian goods and services.

an increase in national defense is possible only if we produce more butter.

only guns and butter can be produced in developing economies.

A production possibilities curve indicates the

combinations of goods and services an economy is producing.

maximum combinations of goods and services an economy can produce given its available resources and technology.

maximum combinations of goods and services an economy can produce given unlimited resources.

average combinations of goods and services an economy can produce given its available resources and technology.

Which of the following is an assumption under which the production possibilities curve is drawn?

Total unemployment is zero.

The supply of resources is fixed.

The price level is changing.

Technology is changing.

A point on a nation's production possibilities curve represents

an undesirable combination of goods and services.

combinations of production that are unattainable, given current technology and resources.

levels of production that will cause both unemployment and inflation.

the full employment of resources to achieve a particular combination of goods and services.

The production possibilities curve illustrates which two essential principles?

factors of production and price signals

scarce resources and opportunity cost

market mechanisms and laissez-faire

economic growth and market failure

If an economy experiences constant opportunity costs with respect to two goods, then the production possibilities curve between the two goods will be

bowed outward or concave from below.

a straight, downward-sloping line.

bowed inward or convex from below.

bowed outward until the two goods are equal, and then bowed inward.

The production possibilities curve illustrates  
the limitations that exist because of scarce resources.  
that there is no limit to what an economy can produce.  
that there is no limit to the level of output.  
the existence of unlimited wants and resources.

According to the law of increasing opportunity costs,  
the more one is willing to pay for resources, the smaller will be the possible level of production.  
increasing the production of a particular good will cause the price of the good to remain constant.  
in order to produce additional units of a particular good, it is necessary for society to sacrifice  
increasingly larger amounts of alternative goods.  
prices will always increase as production levels rise.

According to the law of increasing opportunity costs,  
greater production leads to greater inefficiency.  
greater production means factor prices rise.  
greater production of one good requires increasingly larger sacrifices of other goods.  
higher opportunity costs induce higher output per unit of input.

If an economy experiences increasing opportunity costs with respect to two goods, then the  
production possibilities curve between the two goods will be  
bowed outward with respect to the origin.

a straight, downward-sloping line.

bowed inward with respect to the origin.

bowed outward with respect to the origin until the two goods are equal, and then bowed inward.

If a production possibilities curve between tanks and trucks has increasing opportunity cost, producing more tanks

lowers the cost of each individual tank.

can be done at a constant opportunity cost.

requires us to give up larger and larger amounts of trucks per tank produced.

is not possible due to scarcity.

If the United States decides to convert automobile factories to tank production, as it did during World War II, but finds that some auto manufacturing facilities are not well suited to tank production, then

the production possibilities curve between tanks and automobiles will appear as a straight line.

the production possibilities curve between tanks and automobiles will shift outward.

decreasing opportunity costs will occur with greater automobile production.

increasing opportunity costs will occur with greater tank production.

If North Korea is currently producing at efficiency and it proceeds to increase the size of its military, then, if nothing else changes,

production possibilities curve will shift outward.

production possibilities curve will shift inward.

production of nonmilitary goods will increase.

production of nonmilitary goods will decrease.

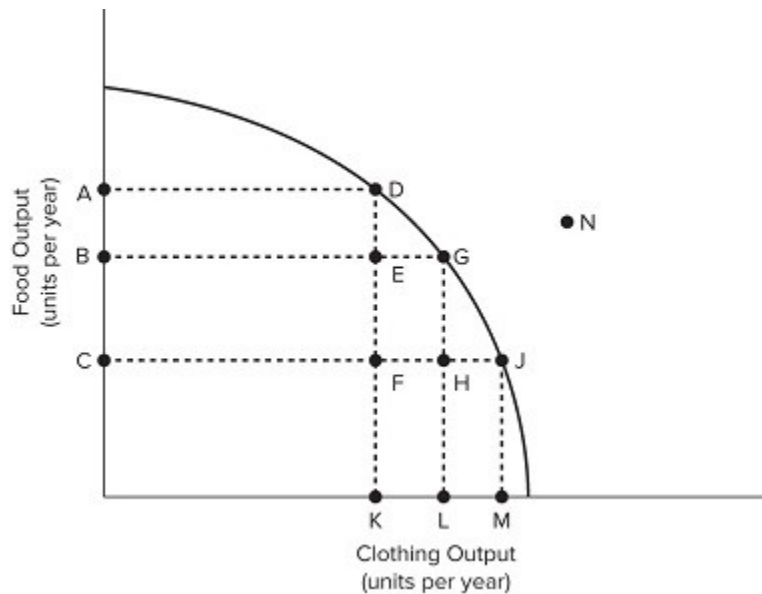
When an economy is producing efficiently, it is  
producing a combination of goods and services beyond the production possibilities curve.  
getting the maximum goods and services possible from the available resources.  
experiencing decreasing opportunity costs.  
producing equal amounts of all goods.

Which of the following is true when an economy is producing efficiently?

The economy is producing on the production possibilities curve.  
The economy is producing outside the production possibilities curve.  
The economy is getting the fewest goods and services from the available resources.  
Everyone in the economy is happy.

The points on a production possibilities curve show  
desired output.  
actual output.  
potential output.  
inefficient output.

In terms of the production possibilities curve, inefficiency is represented by  
all points on the curve.  
all points outside the curve.  
all points inside the curve.  
a rightward shift of the curve.



Refer to the figure. Point F represents

An efficient and attainable level of production for clothing and food.

An unattainable level of production for clothing and food, given current technology and resources.

An optimal level of production of clothing and food.

An inefficient, but attainable, level of production for clothing and food.

If an economy is producing inside the production possibilities curve, then there is full employment of resources.

it is operating efficiently.

it can produce more of one good without giving up some of another good.

there are not enough resources available to produce more output.

Producing at a point inside the production possibilities curve

means society must be using its resources efficiently.

is unattainable given the present level of technology.

is feasible when the nation is at war but not feasible when the nation is at peace.

suggests we are forgoing the ability to produce more of both goods.

A technological advance is best represented by

a shift outward of the production possibilities curve.

a shift inward of the production possibilities curve.

a movement from inside the production possibilities curve to a point on the production possibilities curve.

a movement from the production possibilities curve to a point inside the production possibilities curve.

Which of the following events would allow the production possibilities curve to shift outward?

The economy's capital stock declines.

More teenagers enter the labor force.

Technology is lost.

People begin to retire at earlier ages.

Economic growth is best represented by a

shift outward of the production possibilities curve.

shift inward of the production possibilities curve.

movement from inside the production possibilities curve to a point on the production possibilities curve.

movement from the production possibilities curve to a point inside the production possibilities curve.

Which of the following will cause the production possibilities curve to shift inward?

an increase in the working-age population

a decrease in the size of the labor force

a technological advance

an increase in knowledge

Which of the following is *not* a basic decision that all nations must confront?

Should we have economic growth?

How should we produce goods and services?

For whom should goods and services be produced?

What goods and services should we produce?

In a market economy, the people who receive the goods and services that are produced are those who

need the goods and services the most.

have the most political power.

want the goods and services the most.

are willing to pay the highest price.

Adam Smith's invisible hand is now called

economic growth.

the market mechanism.

opportunity cost.

laissez-faire.

The market mechanism is best defined as

the use of market prices and sales to signal desired output.

the use of market signals and government directives to select economic outcomes.

the process by which the production possibilities curve shifts inward.

price regulation by government.

The market mechanism

is not a very efficient means of communicating consumer demand to the producers of goods and services.

works through central planning by government.

eliminates market failures created by government.

works because prices serve as a means of communication between consumers and producers.

The invisible hand refers to

intervention in the economy by the government bureaucrats we do not see and over whom we have no control.

undiscovered natural resources.

the allocation of resources by market forces.

the person who has the responsibility to coordinate all the markets in a market economy.

The doctrine of laissez-faire is based on the belief that

markets are likely to do a better job of allocating resources than government directives.

government directives are likely to do a better job of allocating resources than markets.

government failure does not exist.

markets result in an unfair distribution of income.

A city's decision to limit smoking in public areas is an example of

the invisible hand at work.

the market mechanism at work.

market success.

government intervention.

A mixed economy

is justified by the superiority of laissez-faire over government intervention.

utilizes both market and nonmarket signals to allocate goods and services.

relies on the use of central planning by private firms rather than the government.

is one that allows trade with other countries.

Which of the following may be used to correct market failure?

the market mechanism

laws and regulations

laissez-faire price policies

government failure

When the invisible hand does not produce optimal outcomes for the economy, there is evidence of

market failure.

government failure.

macroeconomic failure.

scarcity.

Government intervention may achieve a more optimal outcome than the market mechanism when addressing

inefficient bureaucracy.

consumption of cigarettes.

the supply of new hot dog stands.

government failure.

If market signals result in pollution beyond the optimal level, then the economy experiences government failure.

a laissez-faire approach will reduce the level of pollution.

the market mechanism has failed to achieve optimal outcomes.

the government is allocating resources inefficiently.

Which of the following has occurred when government directives do not produce better economic outcomes?

government failure

market failure

macroeconomic failure

scarcity

Which of the following is *not* an example of government failure?

bureaucratic delays

required use of pollution control technology that is obsolete

inefficient incentives

efficient incentives

Macroeconomics focuses on the behavior of  
individual consumers.  
government agencies.  
the overall economy.  
a specific market.

Which of the following is NOT a microeconomic statement?

Rising wage rates for manufacturing workers resulted in lower production as firms cut costs.  
Li decided to purchase new boots for the winter months.  
Electronics prices have been declining in recent decades due to improvements in technology.  
Congress increased the minimum wage rate in January.

Which of the following is *not* a macroeconomic statement?

The unemployment rate for the United States rose to 5 percent in the last quarter.  
The Federal Reserve lowered interest rates at its last meeting.  
Congress increased the minimum wage rate in January.  
Jenny's wage rate rose and, in response, she decided to work more hours.

The study of microeconomic theory focuses on  
individual behavior in the economy.  
the operation of the entire economy.  
the role of the banking system in the economy.  
the interaction of international trade and domestic production of goods and services.

Microeconomics is concerned with issues such as

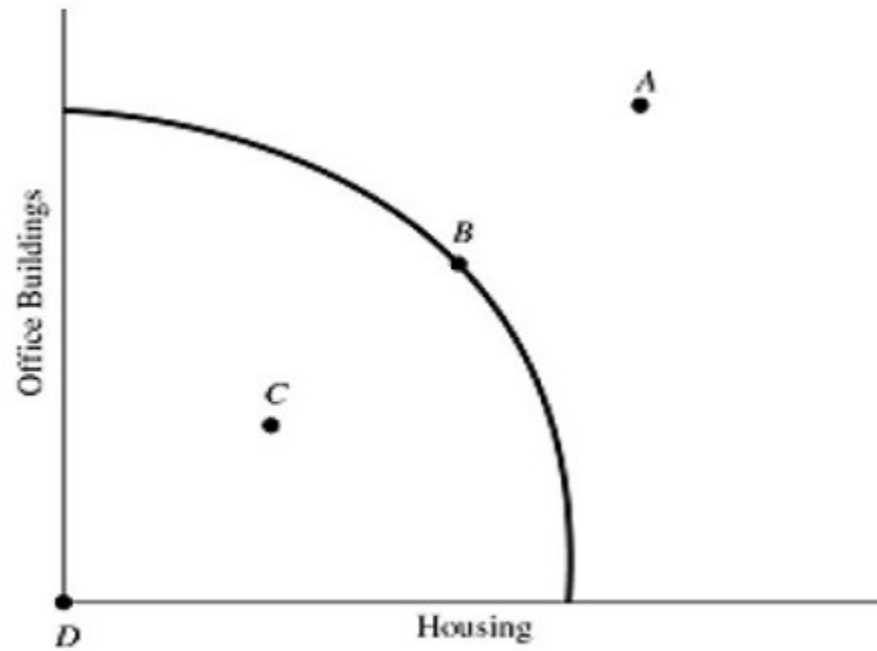
- the demand for bottled water by individuals.
- the level of inflation in the economy.
- maintaining a strong level of economic growth.
- the current level of unemployment.

Economic models are used by economists to do all of the following *except*

- predict economic behavior.
- develop economic policies.
- explain economic behavior.
- force people to behave a certain way.

The Latin phrase *ceteris paribus* means

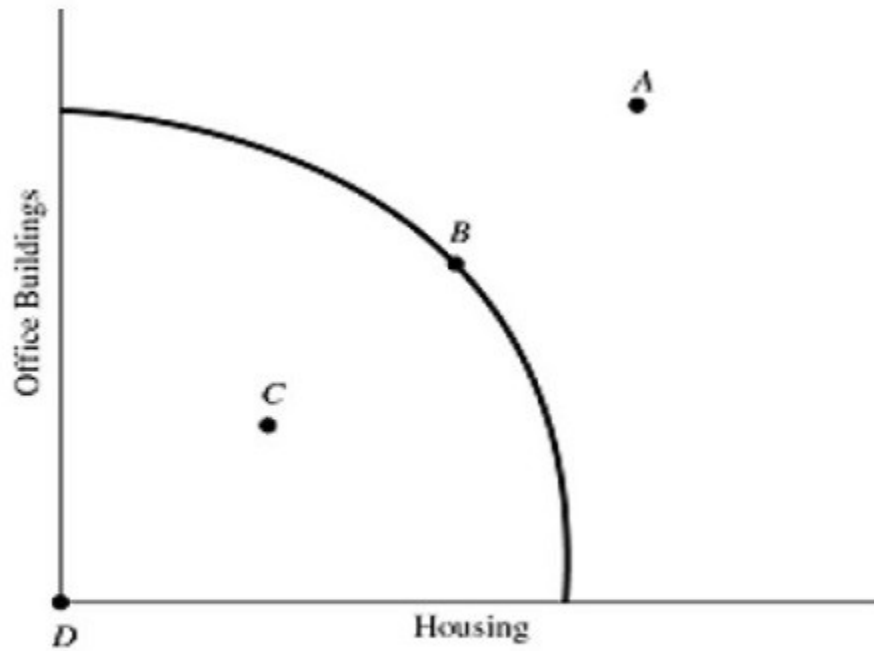
- the production possibilities curve never shifts.
- laissez-faire.
- other things remaining equal.
- the invisible hand.



**Figure**  
**Production Possibilities Curve**

Refer to the figure. At which point is society employing some of its available technology, but not all of it?

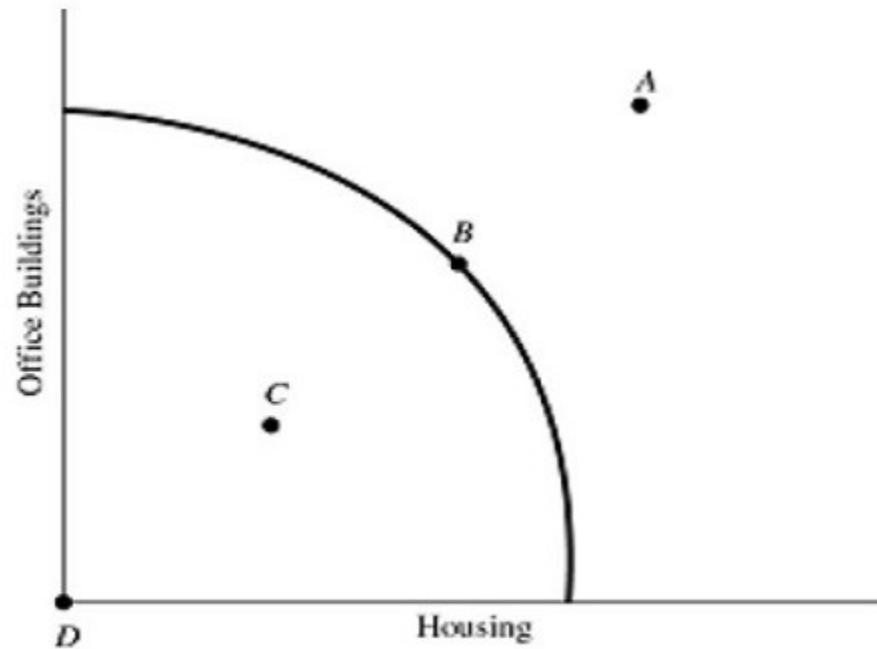
- A
- B
- C
- D



**Figure**  
**Production Possibilities Curve**

Refer to the figure. At which point is society producing the most output possible with the available resources and technology?

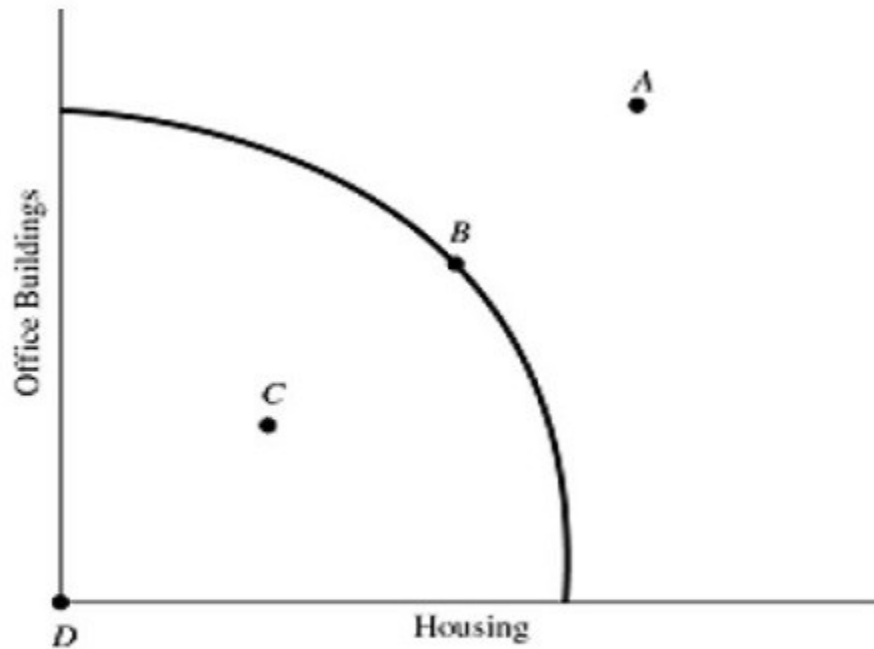
- A
- B
- C
- D



**Figure**  
**Production Possibilities Curve**

Refer to the figure. At which point is society producing some of each type of structure but still producing inefficiently?

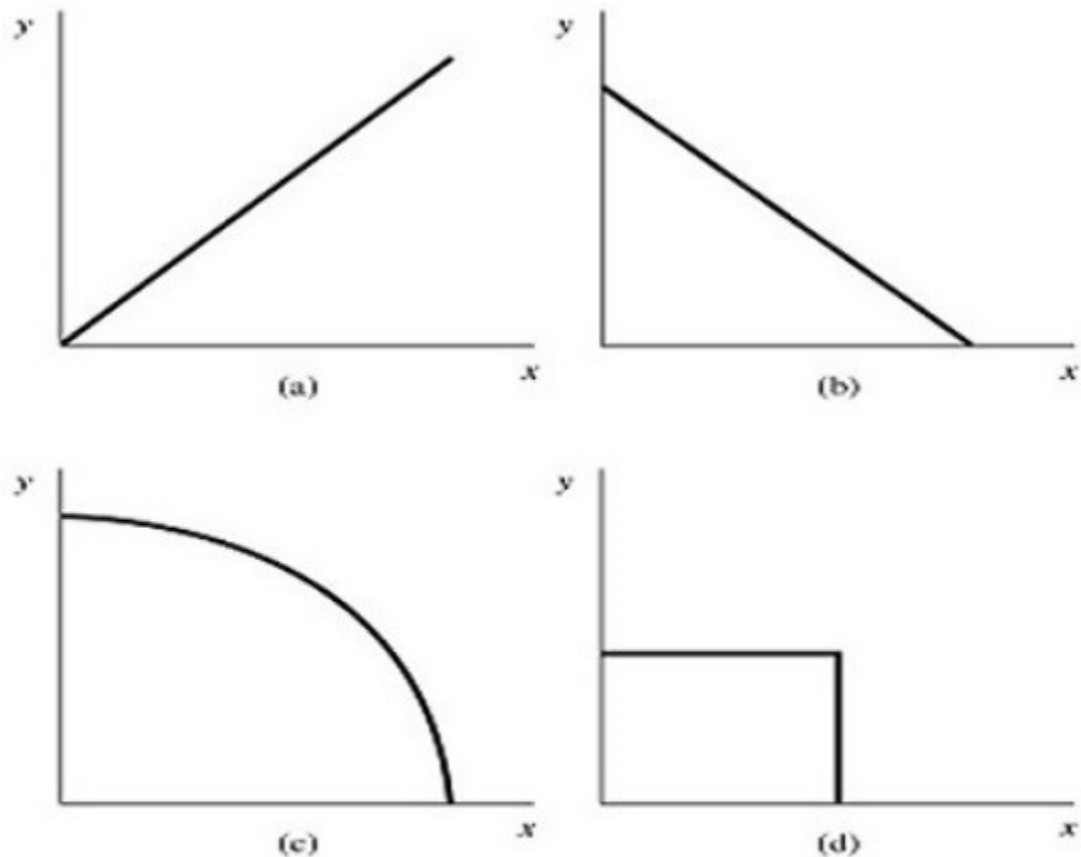
- A
- B
- C
- D



**Figure**  
**Production Possibilities Curve**

Refer to the figure. Which point might society be able to produce if new resources were discovered but cannot produce with current resources?

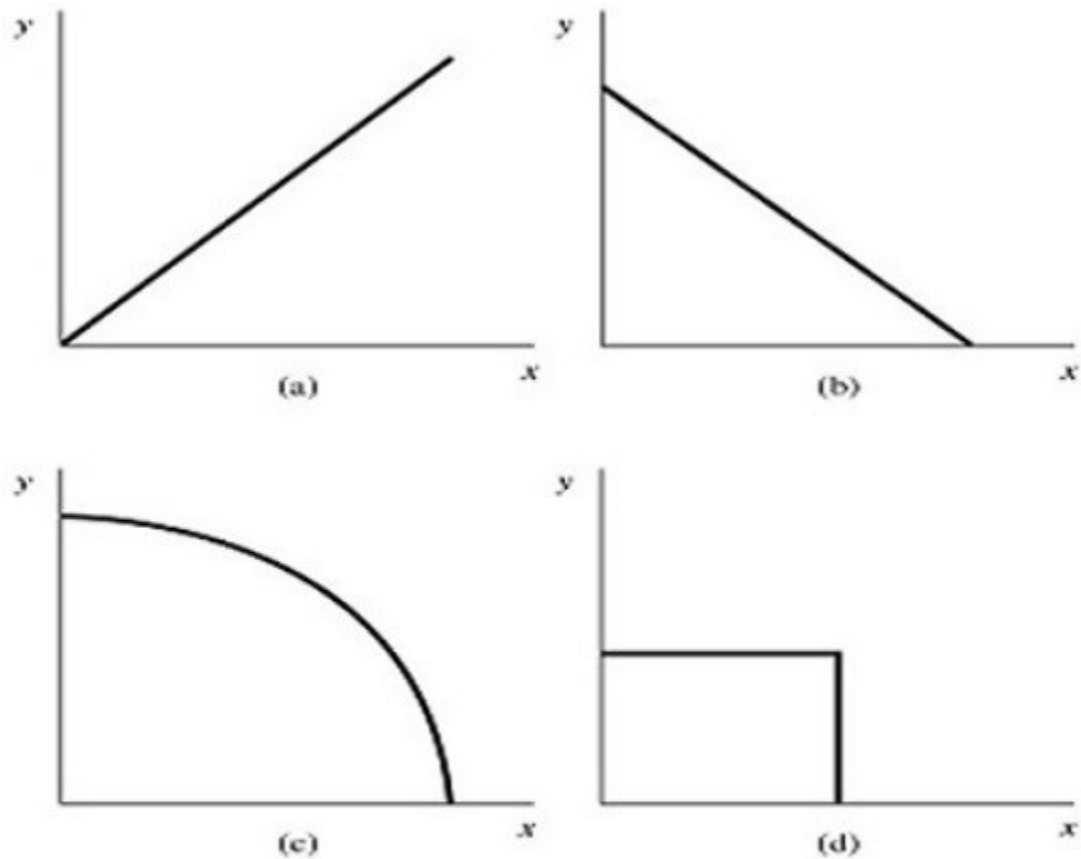
- A
- B
- C
- D



**Figure**  
**Production Possibilities Curves**

Refer to the figure. Which panel best represents a production possibilities curve for two goods that obey the law of increasing opportunity costs?

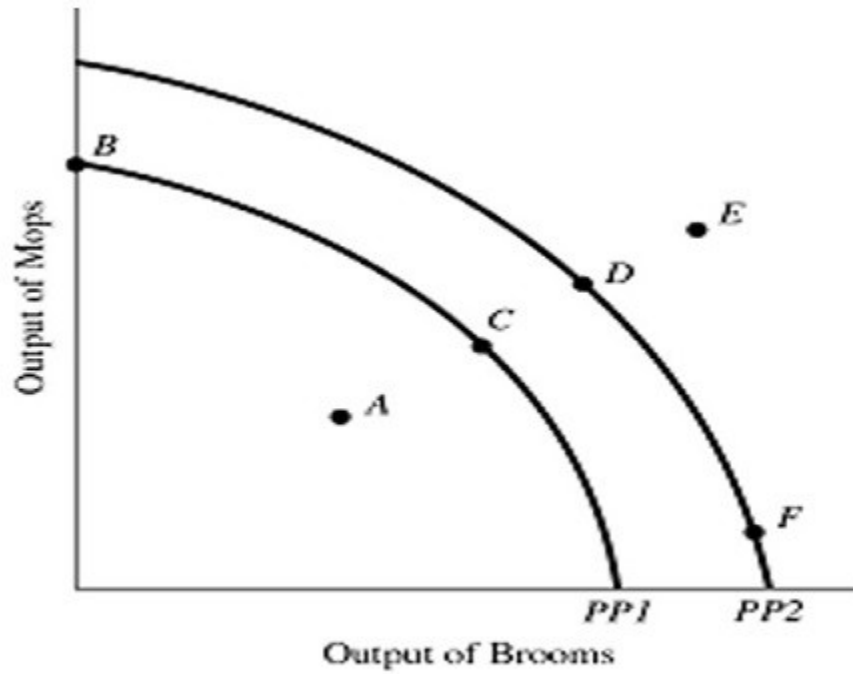
- A
- B
- C
- D



**Figure**  
**Production Possibilities Curves**

Refer to the figure. Which panel best represents a production possibilities curve for two goods for which there are constant opportunity costs?

- a
- b
- c
- d



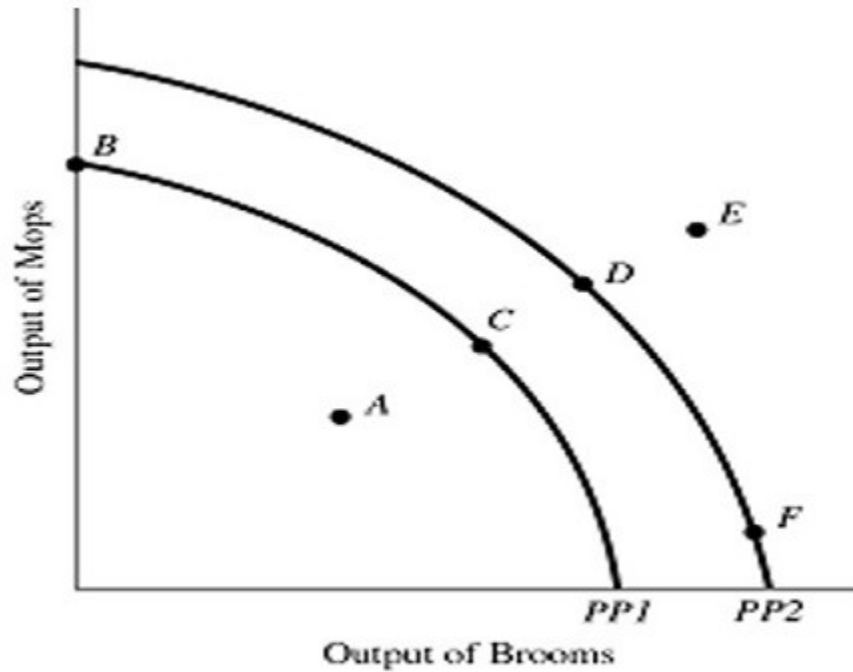
**Figure**

Refer to the figure. Starting from PP1, an increase in the capacity to produce can be represented by a movement from  
point A to point B.

point A to point C.

point B to point C.

point C to point F.



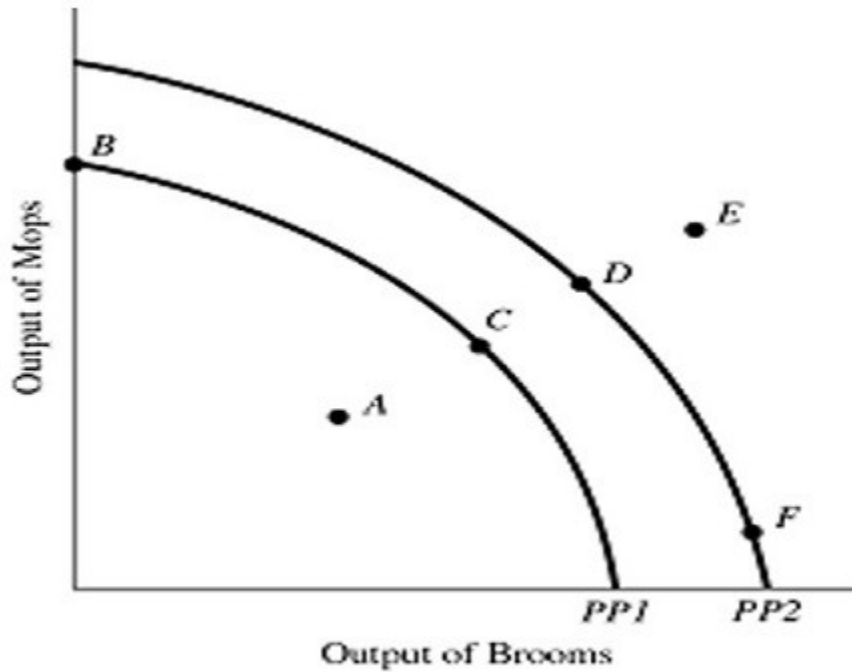
**Figure**

Refer to the figure. At point A,  
there is inefficient use of available resources.

the available technology keeps production inside PP1.

all available resources are being used efficiently.

an increase in the production of mops would definitely require a decrease in the production of brooms.



**Figure**

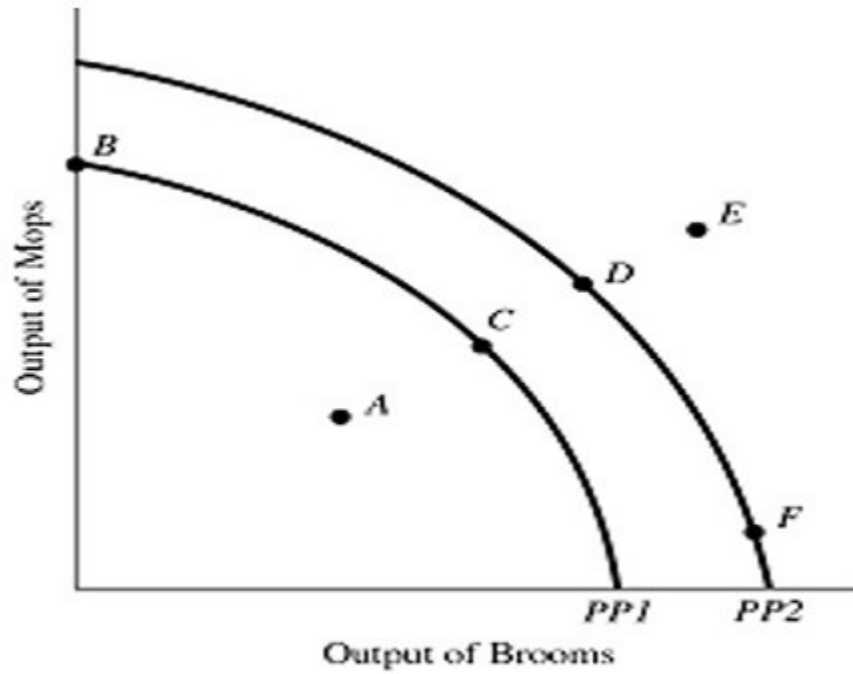
Refer to the figure. Which of the following is true about the combination of mops and brooms represented by point E?

Point E is efficient now.

Point E is attainable if this economy uses more of its available resources.

Point E is unattainable if this economy becomes more efficient.

Point E is attainable only if more resources become available or technological advances are made.



**Figure**

Refer to the figure. An increase in the proportion of the population that is unemployed above the normal rate is best represented by a movement from point C to point A.

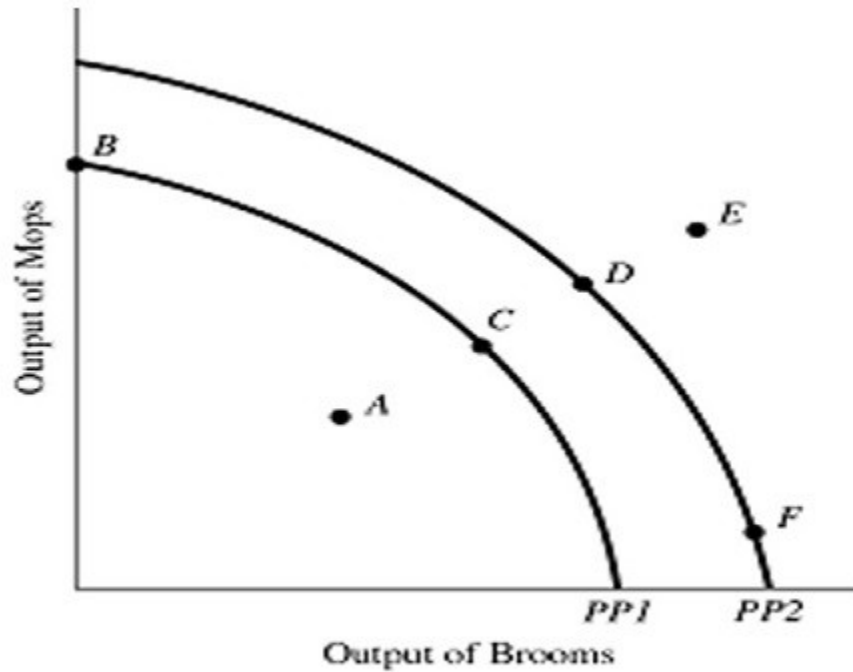
point C to point D.

point D to point C.

point E to point D.

point C to point A.

point E to point D.



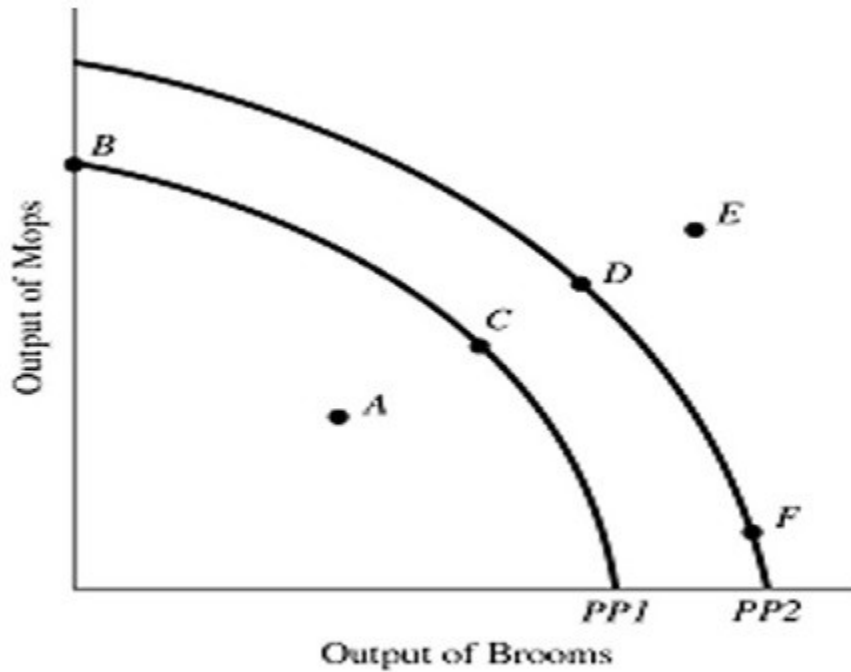
**Figure**

Refer to the figure. A movement from point F to point D results in a reallocation of resources from mop production to broom production.

permanent unemployment of workers producing brooms.

a reallocation of resources from broom production to mop production.

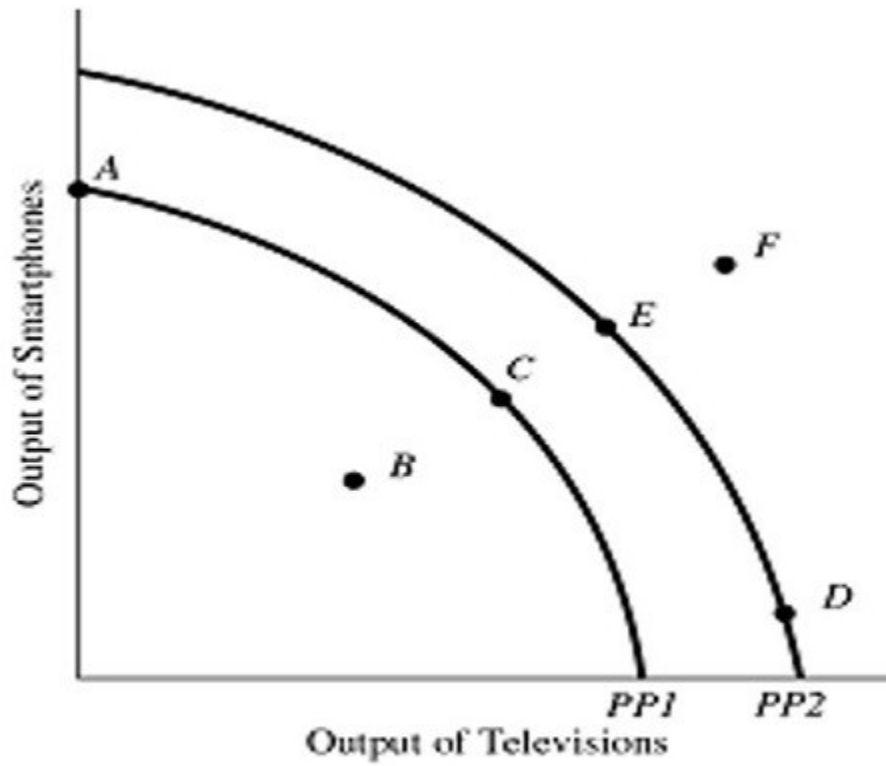
more efficient production.



**Figure**

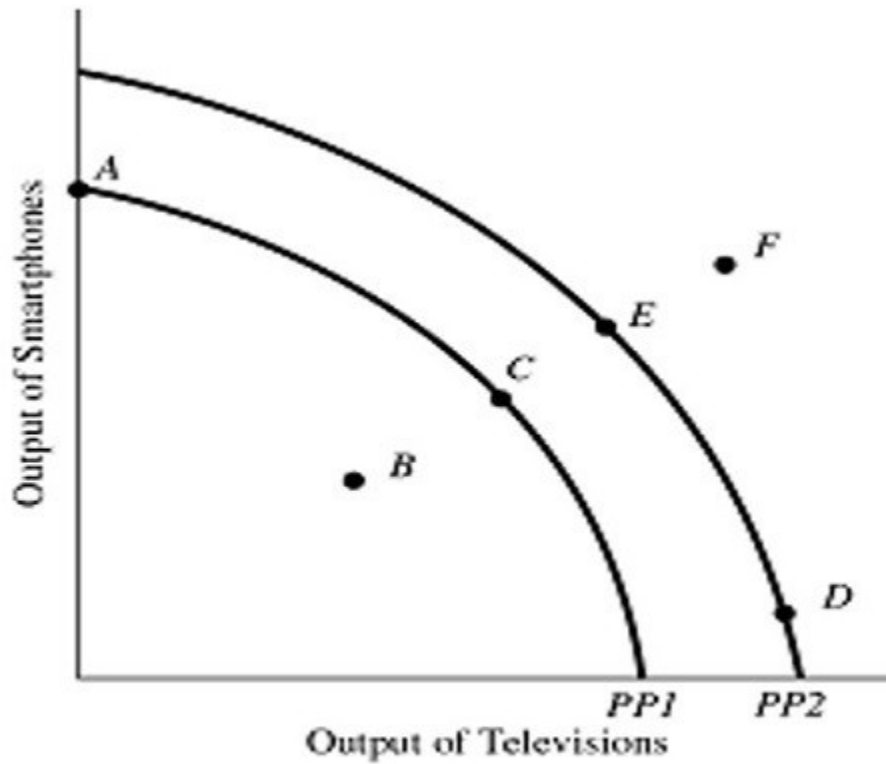
Refer to the figure. A shift of the production possibilities curve from PP1 to PP2 could be caused by

- a decrease in the quantity of raw materials available.
- a decline in the production skills of workers.
- the use of improved production technology.
- a natural disaster that destroys infrastructure.



## Figure

- Refer to the figure. Starting at *PP1*, an increase in the capacity to produce can be represented by a movement from point
- A to point B.
  - C to point E.
  - A to point C.
  - D to point E.



**Figure**

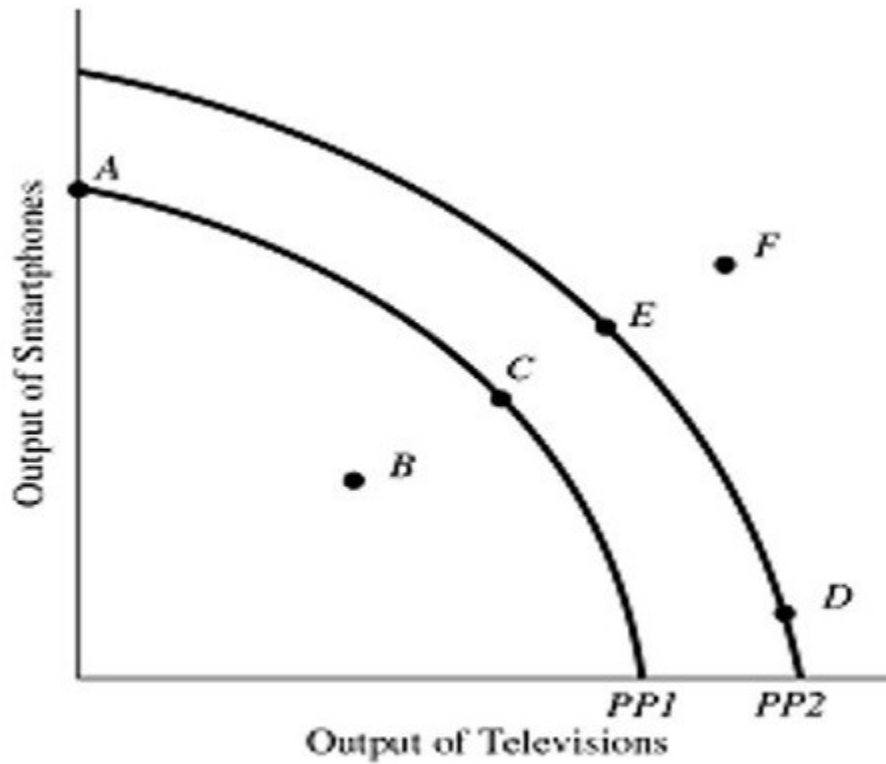
Refer to the figure. Which of the following is true about the combination of televisions and smartphones represented by point F?

Point F is inefficient now.

Point F is unattainable even with advances in technology.

Point F will be more easily attainable if the government takes control of all privately run factories.

Point F can possibly be reached if more economic resources become available or technology improves.



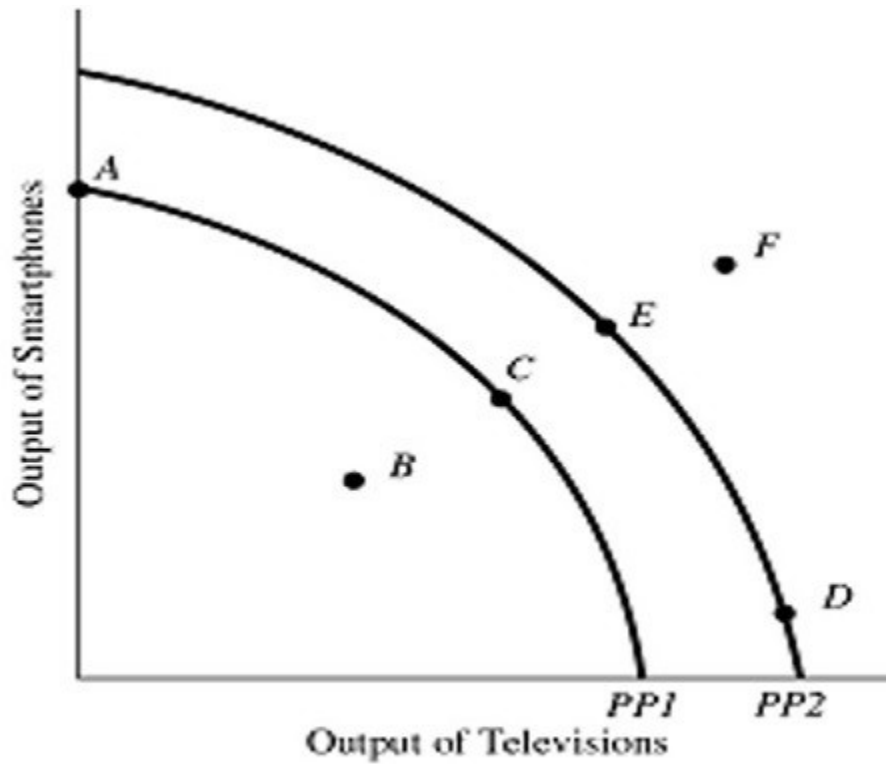
## Figure

Refer to the figure. A movement from point C to point A results in more efficient production.

permanent unemployment of workers producing plasma televisions.

a reallocation of resources from smartphone production to television production.

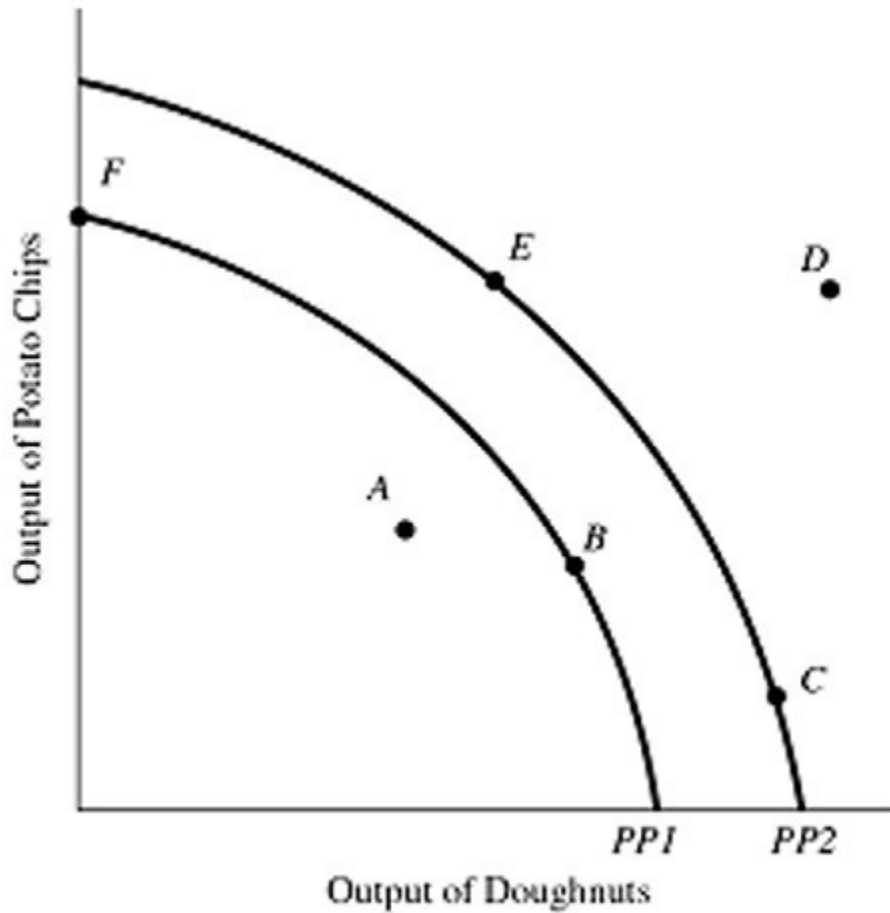
a reallocation of resources from television production to smartphone production.



## Figure

Refer to the figure. A shift of the production possibilities curve from PP1 to PP2 could be caused by

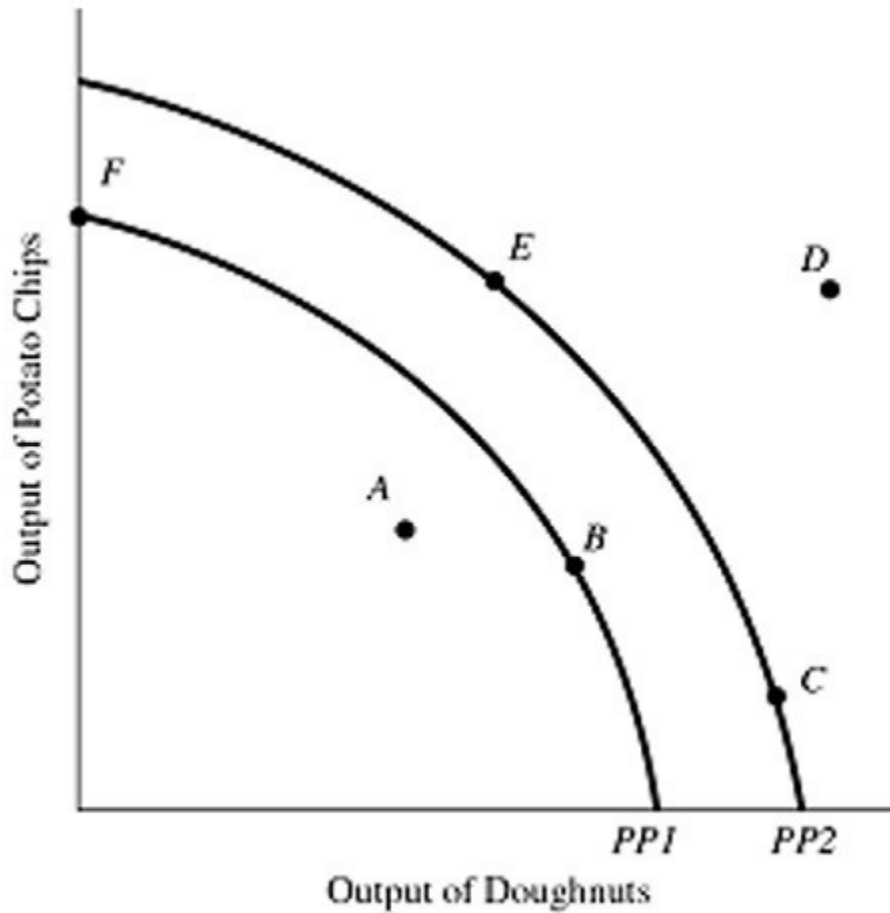
- an increase in the unemployment rate.
- implementation of training programs that improve the skills of workers.
- a flu epidemic that makes many workers sick.
- tougher pollution controls for the producers of televisions and smartphones.



**Figure**

Refer to the figure. If an economy has the capacity to produce represented by PP1, then point B represents:

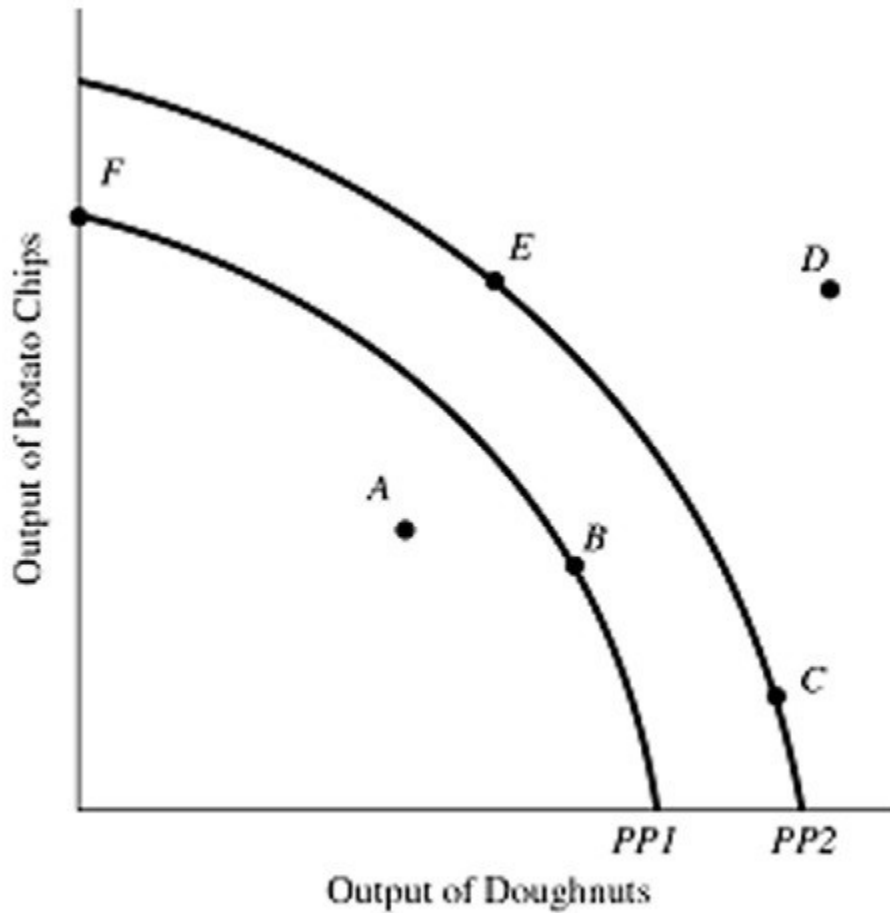
- A constant trade-off between potato chips and doughnuts.
- A combination of potato chips and doughnuts that is not attainable.
- An efficient use of resources.
- An inefficient use of resources.



**Figure**

Refer to the figure. If an economy has the capacity to produce represented by PP2, then point E represents

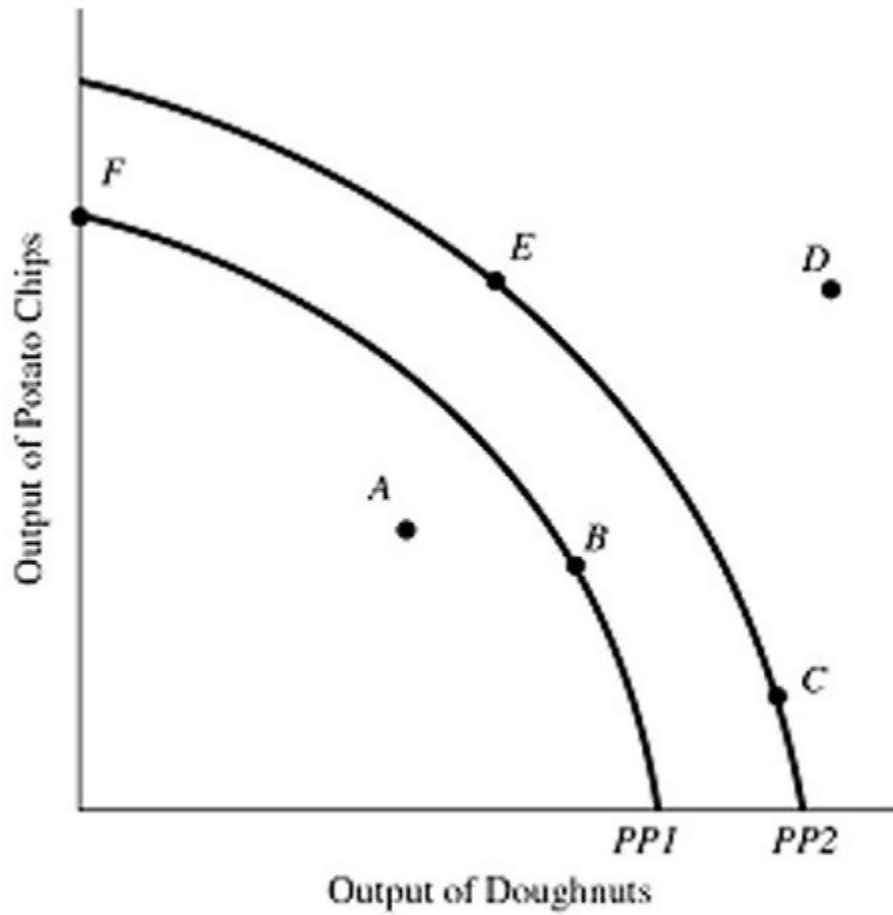
- a constant trade-off between potato chips and doughnuts.
- a combination of potato chips and doughnuts that is not attainable.
- an efficient use of resources.
- an inefficient use of resources.



**Figure**

Refer to the figure. If an economy is currently producing on PP2, which of the following will shift the production possibilities curve toward PP1?

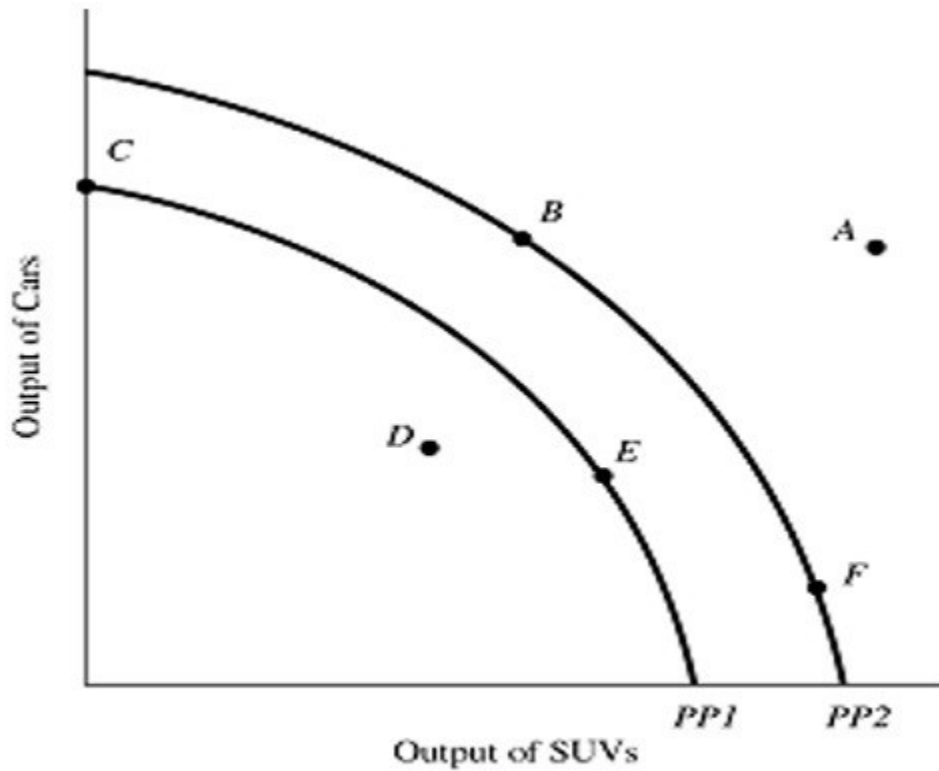
- an increase in the quantity of labor available
- a decrease in the amount of capital available
- a decrease in the level of unemployment toward the normal level
- an advancement in technology



**Figure**

Refer to the figure. At which of the following points will the opportunity cost of producing more doughnuts be greatest?

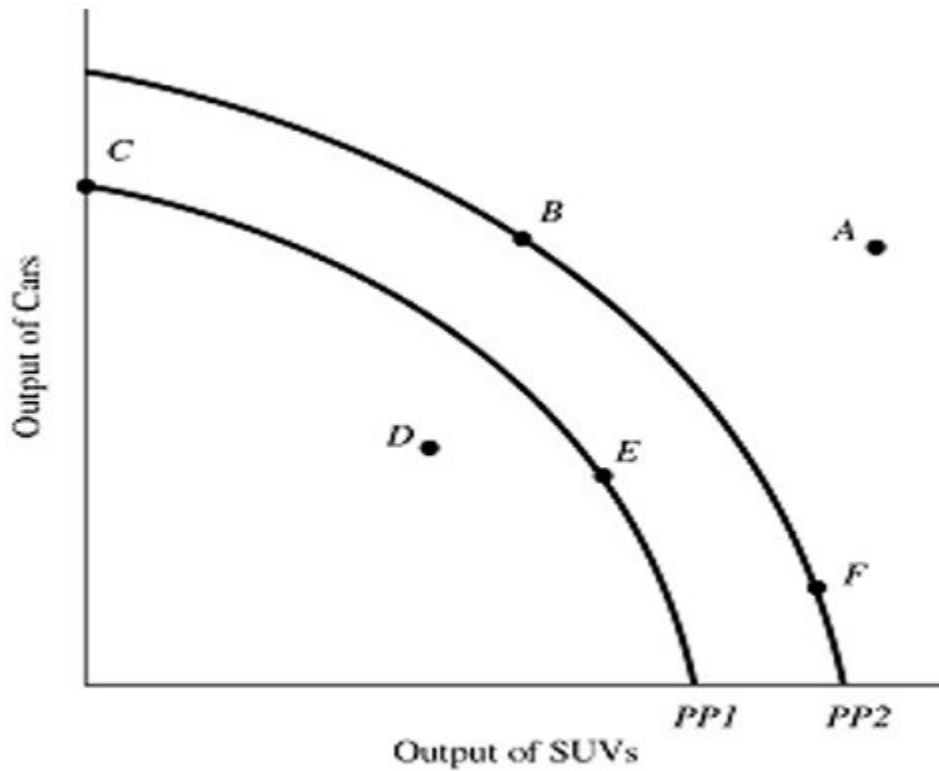
- A
- F
- C
- E



## Figure

Refer to the figure. If an economy has the capacity to produce represented by PP1, then point E represents

- a combination of cars and SUVs that is not attainable.
- a constant trade-off between cars and SUVs.
- a change in technology.
- an efficient use of resources.



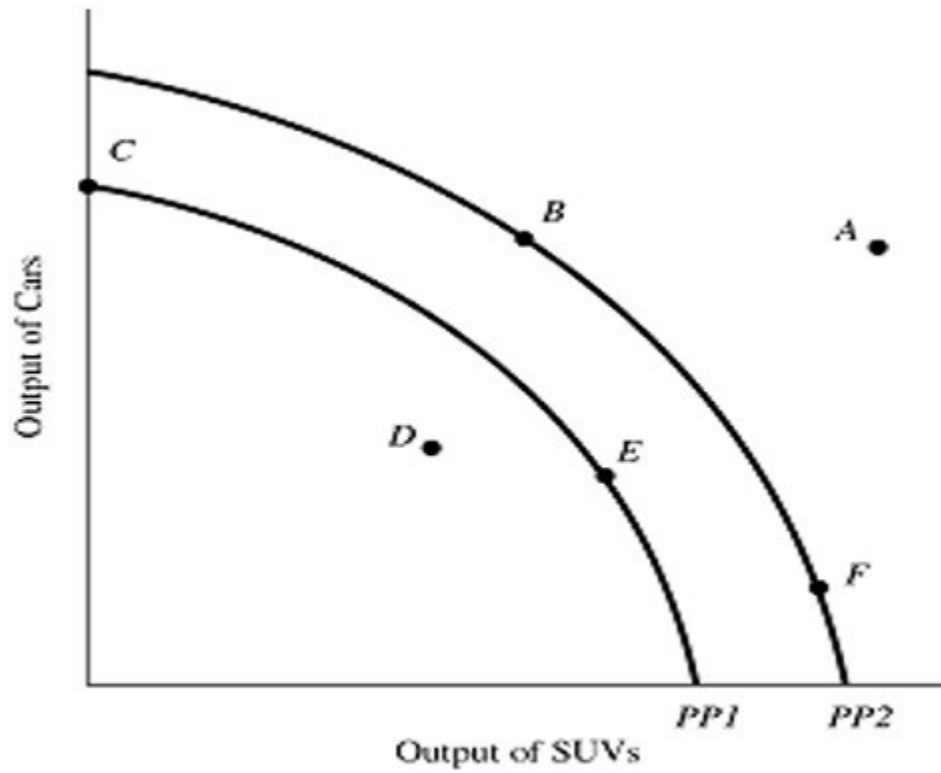
**Figure**

Refer to the figure. If the opportunity cost of producing cars is zero at all levels of production, the production possibilities curve is best represented by a vertical line.

45-degree line starting at the origin.

horizontal line.

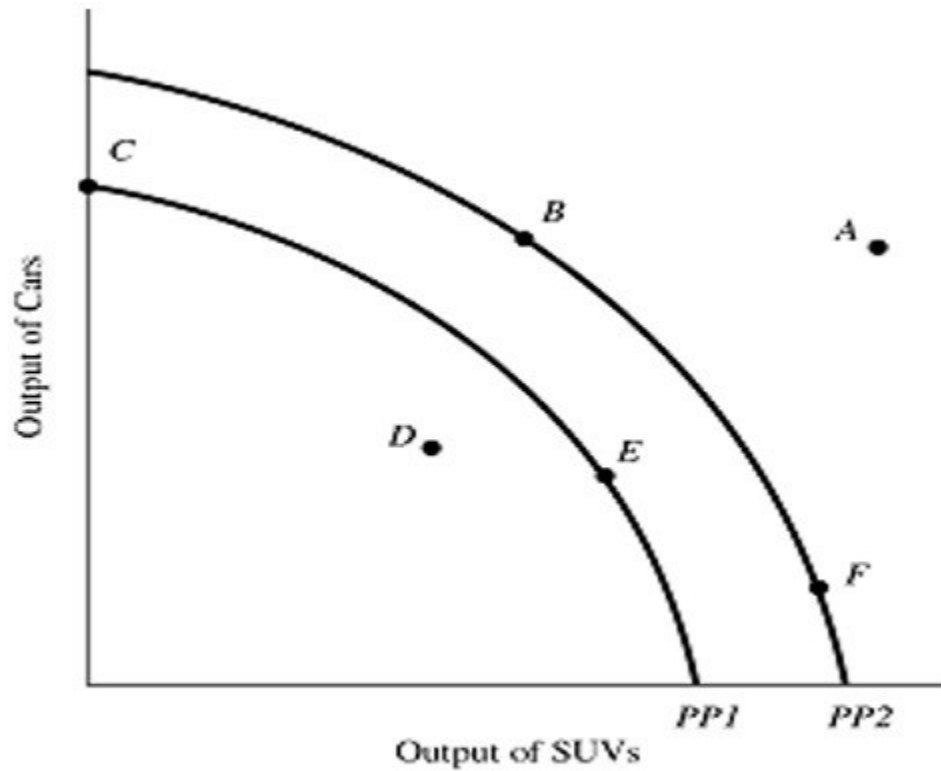
circle.



**Figure**

Refer to the figure. At which of the following points will the opportunity cost of producing one more car be the lowest?

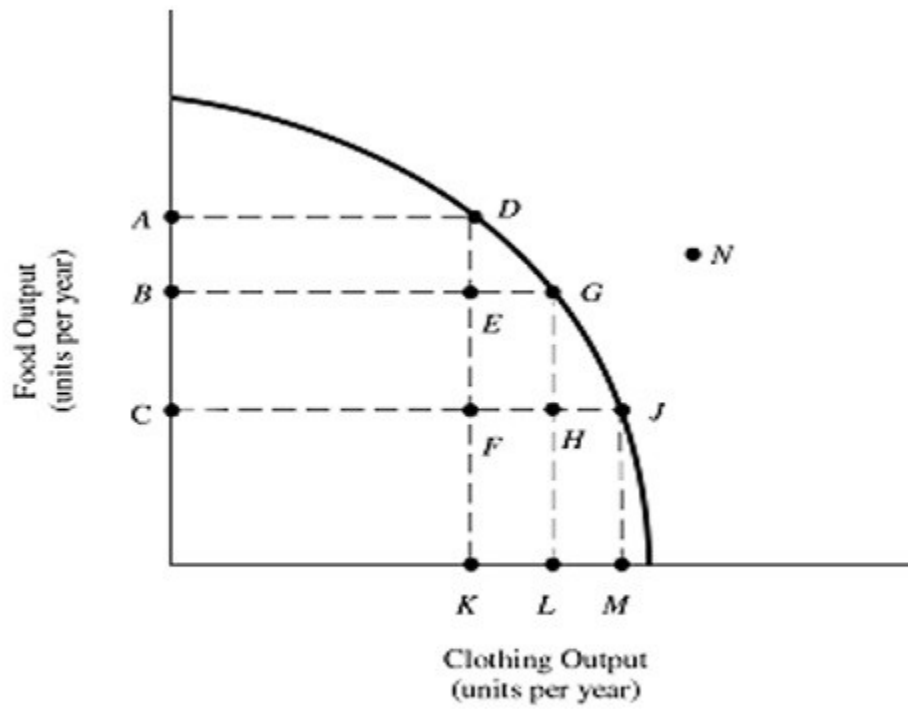
- F
- B
- C
- D



**Figure**

Refer to the figure. At which of the following points will the opportunity cost of producing one more SUV be highest?

- A
- B
- C
- F



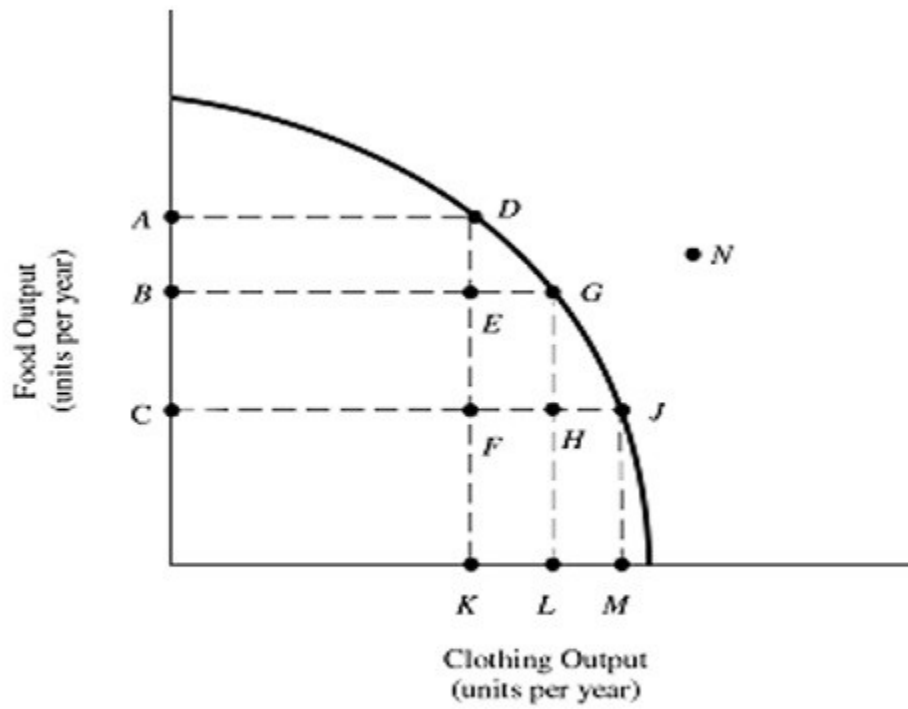
**Figure**

Refer to the figure. This economy will be operating inefficiently at:  
Point E only.

Point G only.

Point H only.

Points E, F, and H.



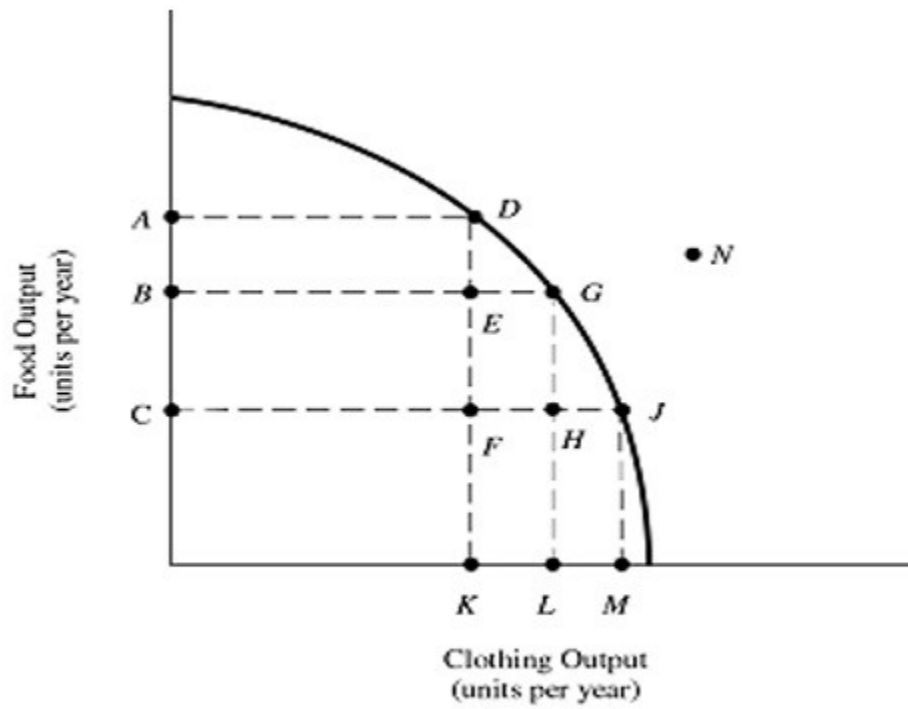
**Figure**

Refer to the figure. This economy will achieve efficiency in production at point D only.

point G only.

point J only.

points D, G, and J.



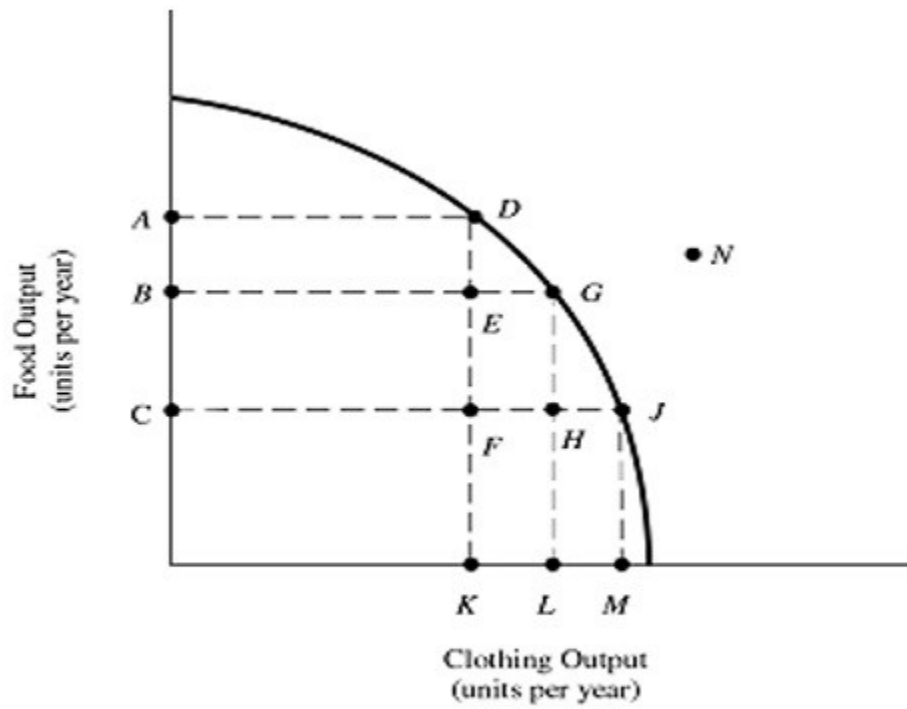
**Figure**

Refer to the figure. The cost of producing at point G rather than point D is  
A units of food.

KL units of clothing.

AB units of food.

L units of clothing.



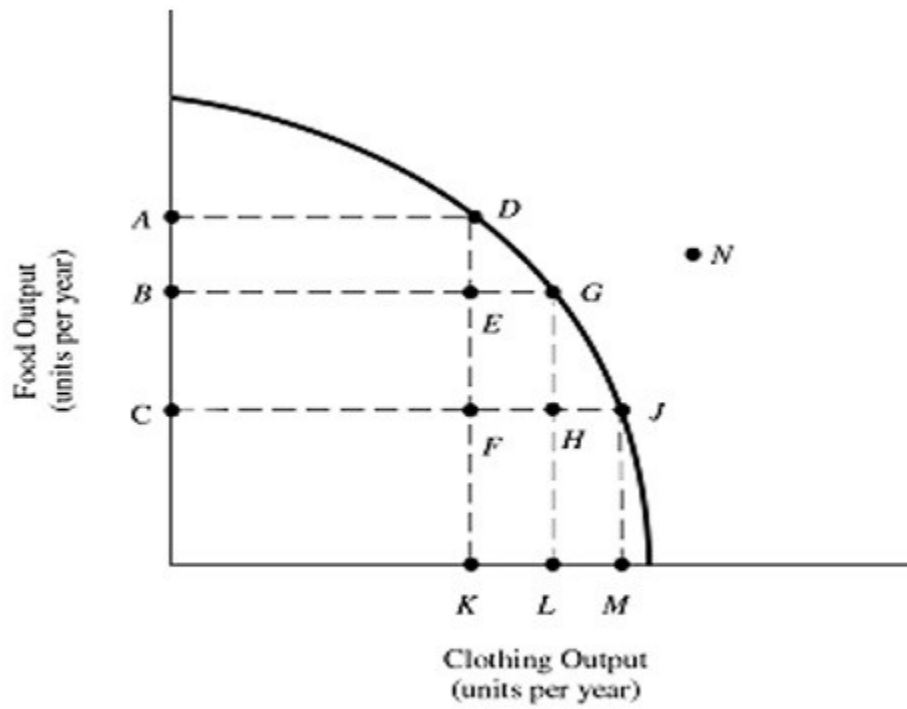
**Figure**

Refer to the figure. The benefit of producing at point G rather than point D is  
OA units of food.

KL units of clothing.

AB units of food.

OL units of clothing.



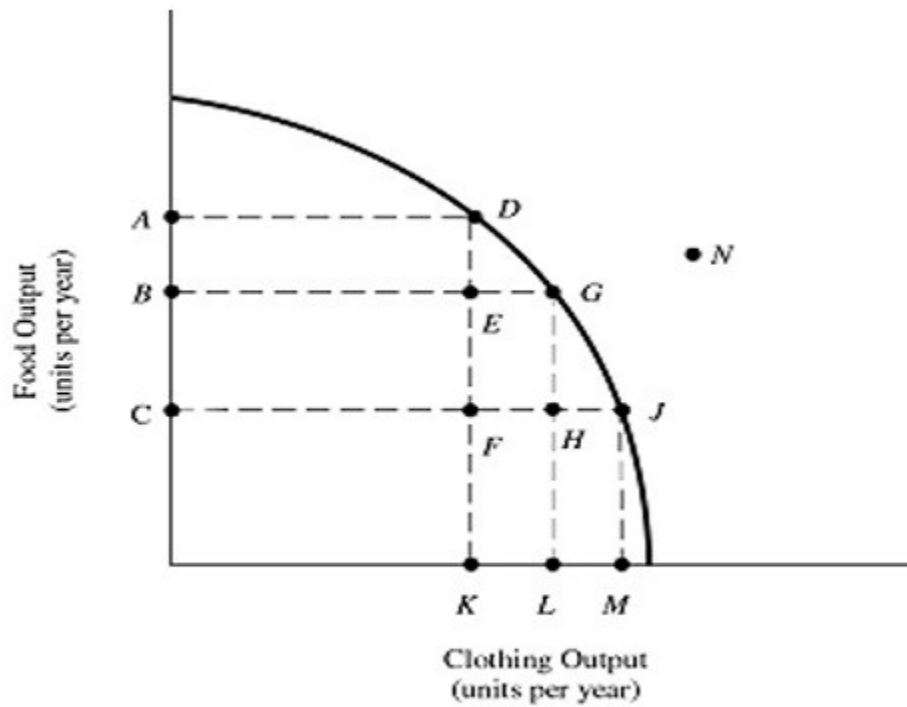
**Figure**

Refer to the figure. The cost of producing at point D rather than point J is KM units of clothing.

AC units of food.

OM units of clothing.

OA units of food.



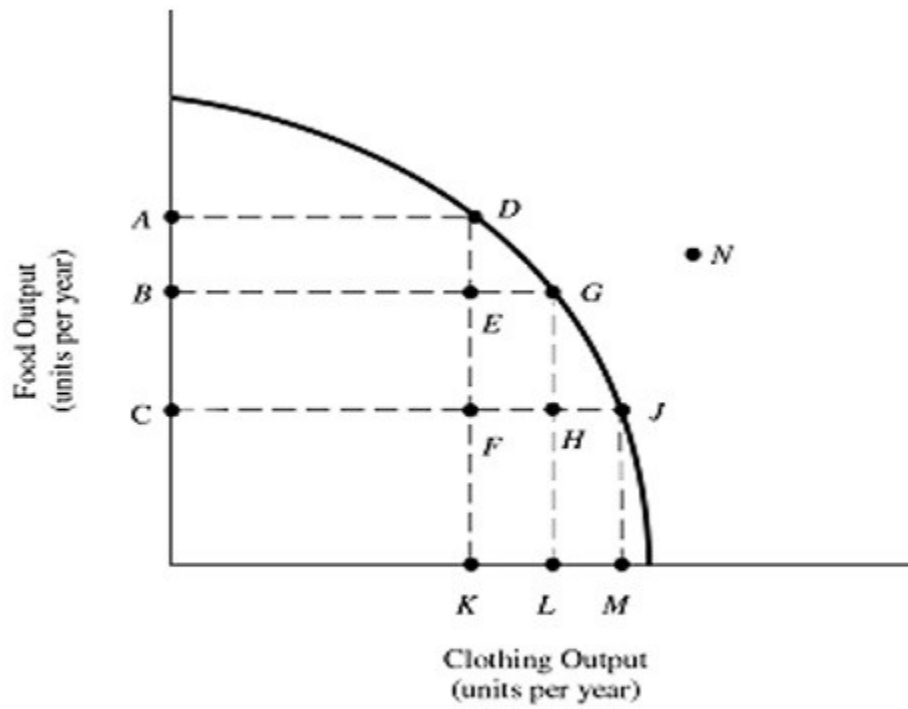
**Figure**

Refer to the figure. If this economy is currently producing at point F, then by employing more resources this economy can move to point D, but not to points G or J.

can move to points D, G, or J.

can move to point G, but not to points D or J.

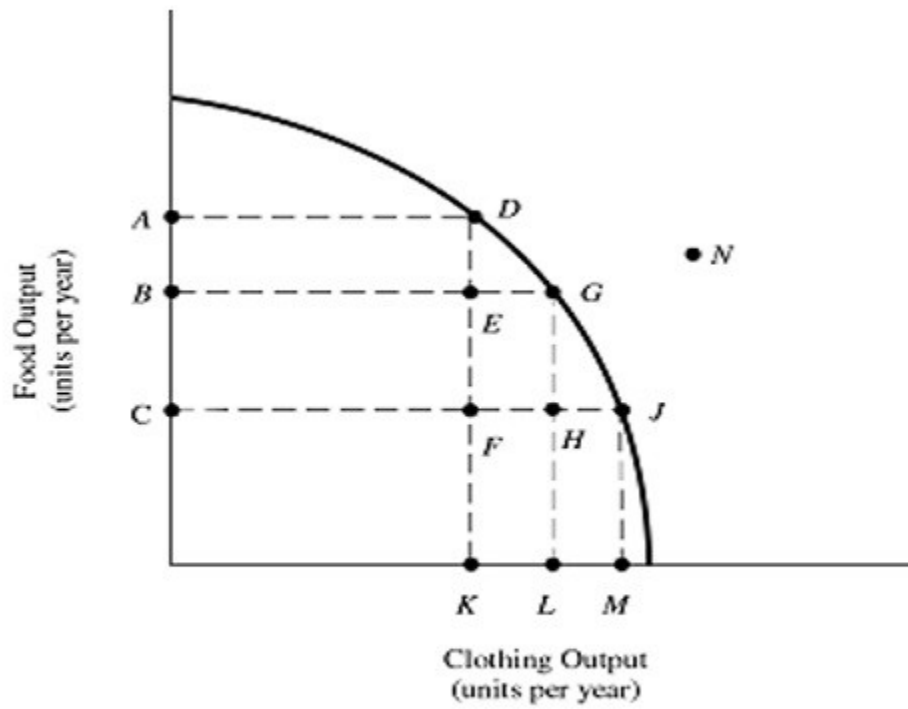
will remain at point F.



**Figure**

Refer to the figure. Which one of the following points is inefficient?

- D
- E
- G
- D, G, and J



**Figure**

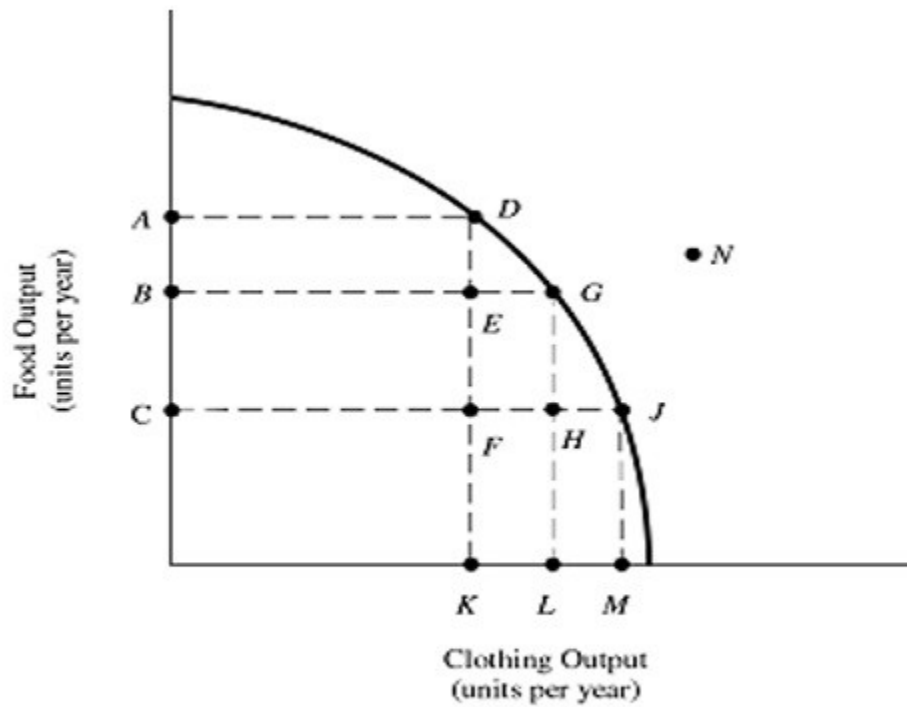
Refer to the figure. Which one of the following points is unattainable, ceteris paribus?

G

F

N

E



**Figure**

Refer to the figure. Which one of the following points shows unemployment of resources above the normal rate?

- H
- J
- N
- D

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

You may infer that the law of increasing opportunity costs applies to increasing production of Stealth Bombers but not to B-1 Bombers

B-1 Bombers

both B-1 Bombers and Stealth Bombers

neither B-1 Bombers nor Stealth Bombers

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

What is the opportunity cost of producing at point V rather than point U?

1 Stealth Bomber

1 B-1 Bomber

10 Stealth Bombers

## 0.9 Stealth Bombers

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

What is the opportunity cost of producing at point V rather than point U?

3 B-1 Bombers

1 B-1 Bomber

4 Stealth Bombers

3 Stealth Bombers

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

In the production range of 7 to 9 Stealth bombers, the opportunity cost of producing 1 more Stealth Bomber in terms of B-1 Bombers is

0.

3.

0.5.

2.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

The highest opportunity cost for Stealth Bombers in terms of B-1 Bombers is

1 B-1 Bomber.

3 B-1 Bombers.

2 B-1 Bombers.

0.5 B-1 Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

The highest opportunity cost for B-1 Bombers in terms of Stealth Bombers is

1 Stealth Bomber.

3 Stealth Bombers.

2 Stealth Bombers.

0.5 Stealth Bomber.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

The lowest opportunity cost for B-1 Bombers in terms of Stealth Bombers is  
0 Stealth Bombers.

2 Stealth Bombers.

1 Stealth Bomber.

0.5 Stealth Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| S           | 0             | NA                                  | 10                |                                 |
| T           | 1             |                                     | 9                 |                                 |
| U           | 2             |                                     | 7                 |                                 |
| V           | 3             |                                     | 4                 | NA                              |

The lowest opportunity cost for Stealth Bombers in terms of B-1 Bombers is  
1 B-1 Bomber.

2 B-1 Bombers.

$\frac{1}{3}$  B-1 Bombers.

½ B-1 Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

The law of increasing opportunity costs applies to both B-1 Bombers and Stealth Bombers.

B-1 Bombers.

Stealth Bombers but not to B-1 Bombers.

neither Stealth nor B-1 Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

If the economy is currently producing at point C, what is the opportunity cost of producing at point B?

45 B-1 Bombers

35 Stealth Bombers

180 Stealth Bombers

10 B-1 Bombers

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

What is gained by producing at point B rather than point C?

45 B-1 Bombers.

30 Stealth Bombers.

180 Stealth Bombers.

10 B-1 Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

What is gained by producing at point B rather than point A?

35 B-1 Bombers

195 Stealth Bombers

15 B-1 Bombers

15 Stealth Bombers

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

### Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

In the production range of 20 to 35 B-1 Bombers, the opportunity cost of producing 1 more B-1 Bomber is

$\frac{195}{20}$  of Stealth Bombers.

$\frac{35}{20}$  of Stealth Bombers.

15 Stealth Bombers.

1 Stealth Bomber.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, ceteris paribus.

### Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

In the production range of 20 to 35 B-1 Bombers, the opportunity cost of producing 1 more Stealth Bomber is

$\frac{195}{20}$  of B-1 Bombers.

$\frac{35}{20}$  of B-1 Bombers.

15 B-1 Bombers.

1 B-1 Bomber.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*. Complete the table by calculating the required opportunity costs for both the B-1 and Stealth Bombers.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

The highest opportunity cost for B-1 Bombers in terms of Stealth Bombers is 33 Stealth Bombers.

20 Stealth Bombers.

10 Stealth Bombers.

5 Stealth Bombers.

The table shows the hypothetical trade-off between different combinations of Stealth Bombers and B-1 Bombers that might be produced in a year with the limited U.S. capacity, *ceteris paribus*.

Production Possibilities for Bombers

| Combination | Number of B-1 | Opportunity Cost (Foregone Stealth) | Number of Stealth | Opportunity Cost (Foregone B-1) |
|-------------|---------------|-------------------------------------|-------------------|---------------------------------|
| A           | 20            | NA                                  | 195               |                                 |
| B           | 35            |                                     | 180               |                                 |
| C           | 45            |                                     | 150               |                                 |
| D           | 50            |                                     | 100               | NA                              |

The lowest opportunity cost for Stealth Bombers is  
10 B-1 Bombers.

1 B-1 Bomber.

$\frac{1}{2}$  B-1 Bombers.

$\frac{1}{10}$  B-1 Bombers.

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

What is the opportunity cost of producing at point M rather than point N?  
23 combs

21 combs

1 brush

2 brushes

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

What is gained by producing at point M rather than point N?

23 combs

21 combs

1 comb

2 combs

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

What is gained from producing at point L rather than point K?

17 combs

10 combs

1 brush

7 brushes

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

The law of increasing opportunity costs applies to both brushes and combs.

combs but not brushes.

brushes but not combs.

neither brushes nor combs.

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

In the production range of 2 to 3 combs, the opportunity cost of producing 1 more comb (in terms of brushes) is

3.33.

7.0.

0.67.

0.14.

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

In the production range of 21 to 23 brushes, the opportunity cost of producing 1 more comb (in terms of brushes) is

$\frac{1}{21}$ .

$\frac{21}{23}$ .

2.0.

4.

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

In the production range of 1 to 2 combs, the opportunity cost of producing 1 more comb (in terms of brushes) is

4.

$\frac{1}{2}$ .

$\frac{2}{17}$ .

$\frac{1}{7}$ .

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

The highest opportunity cost for brushes (in terms of combs) is  
0.10 comb per brush.

23 combs per brush.

0.50 comb per brush.

0.29 comb per brush.

The table shows the hypothetical trade-off between different combinations of brushes and combs that might be produced in a year with the limited capacity for Country X, *ceteris paribus*.

Production Possibilities for Brushes and Combs

| Combination | Number of Brushes | Opportunity Cost of Brushes in Terms of Combs | Number of Combs | Opportunity Cost of Combs in Terms of Brushes |
|-------------|-------------------|-----------------------------------------------|-----------------|-----------------------------------------------|
| J           | 0                 | NA                                            | 4               |                                               |
| K           | 10                |                                               | 3               |                                               |
| L           | 17                |                                               | 2               |                                               |
| M           | 21                |                                               | 1               |                                               |
| N           | 23                |                                               | 0               | NA                                            |

The lowest opportunity cost for combs in terms of brushes is  
10 brushes per comb.

2 brushes per comb.

0.33 brush per comb.

8.5 brushes per comb.

On a production possibilities curve between private and public goods, a decrease in military spending in an effort to increase food production could be represented as

a movement along the production possibilities curve toward more public goods.

a movement along the production possibilities curve toward more private goods.

a shift outward of the production possibilities curve.

a shift inward of the production possibilities curve.

Suppose that North Korea increases the size of its military and produces less food. Assuming that North Korea produces only two things (military defense and food), this change is most consistent with

a movement along the economy's production possibilities curve.

privatization.

a laissez-faire policy.

the law of increasing opportunity costs.

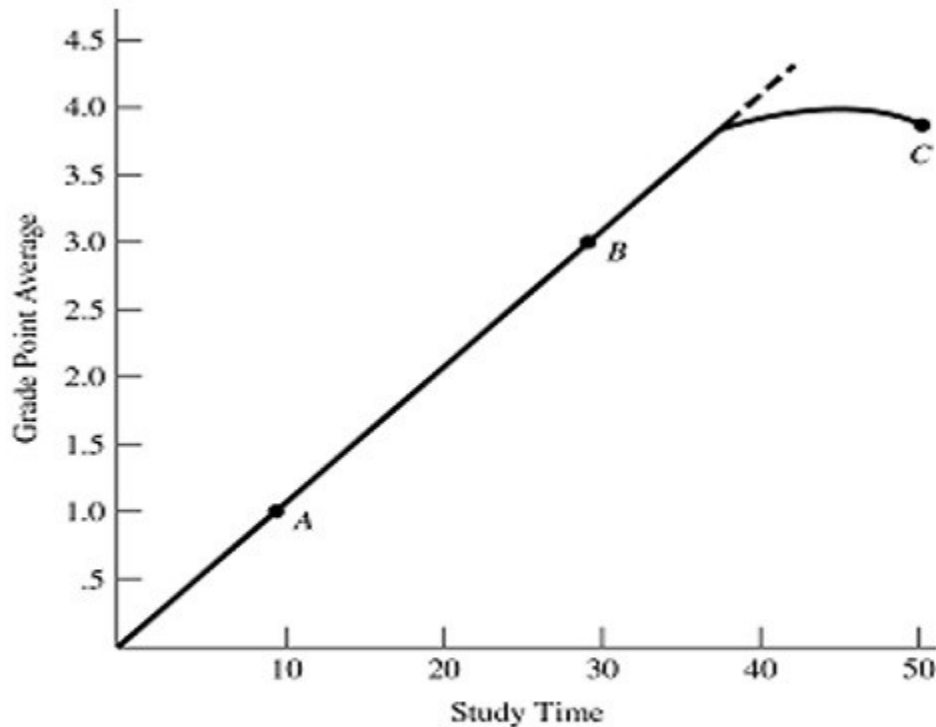
The essential feature of the market mechanism is

government intervention.

an open economy.

market power.

the price signal.



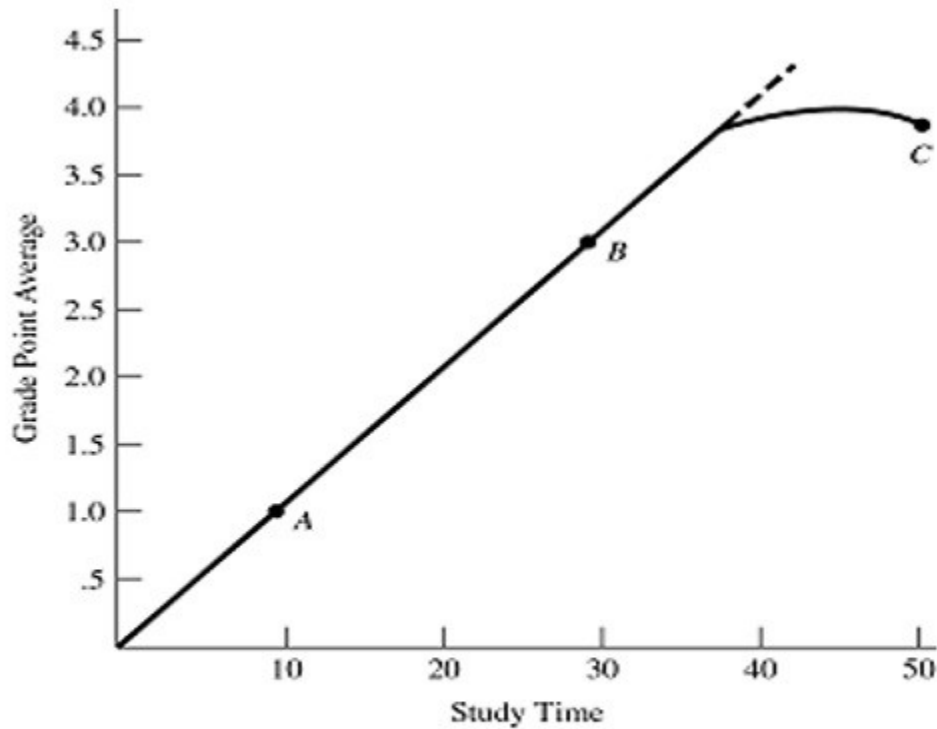
**Figure**  
**Relating Grades and Hours Studied**

Refer to the figure. It suggests that  
the law of increasing opportunity cost does not apply.

resources can be perfectly adapted between study time and grade point average.

the relationship between study time and grade point average is first linear, then nonlinear.

the relationship between study time and grade point average is constant.



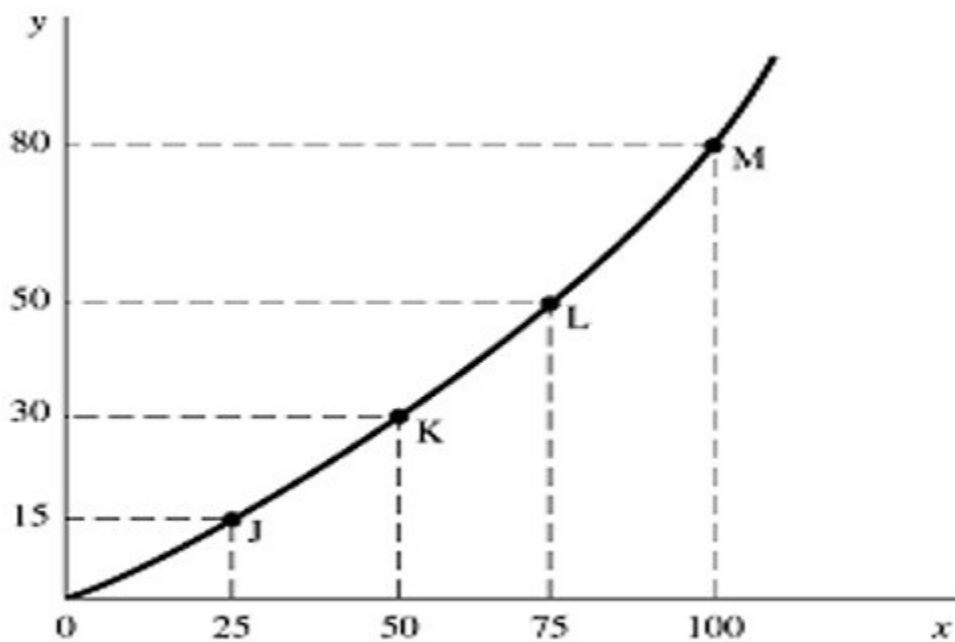
**Figure**  
**Relating Grades and Hours Studied**

Refer to the figure. If the college or university decides to lower grading standards, then this curve will shift rightward.

this curve will shift to the left.

the curve will begin to bend downward at an earlier point.

we will slide up the curve from point B to point C.



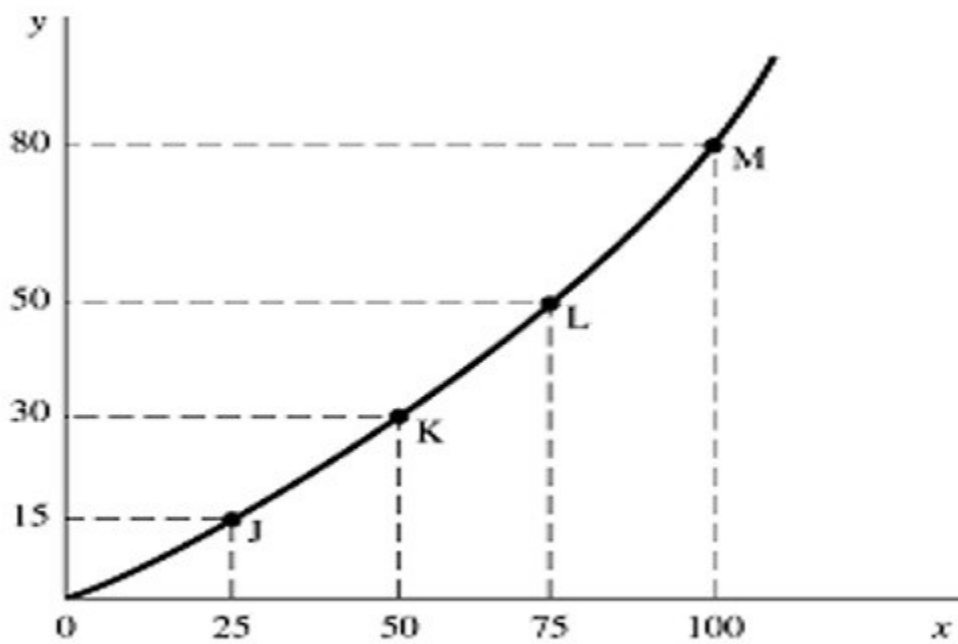
**Figure**

Refer to the figure. As you move up the curve from point J toward point M, the slope increases.

remains constant.

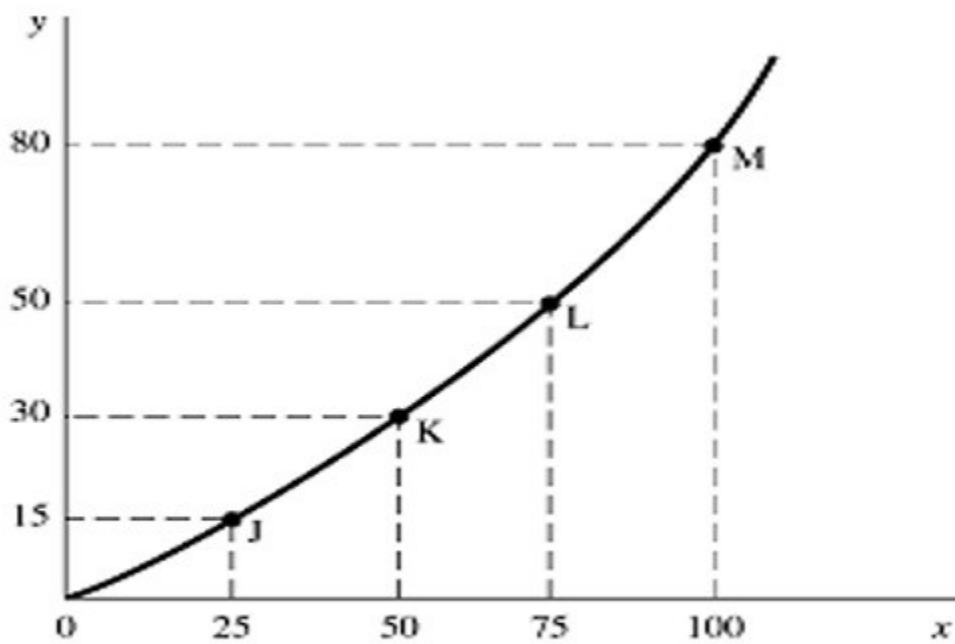
decreases.

becomes negative.



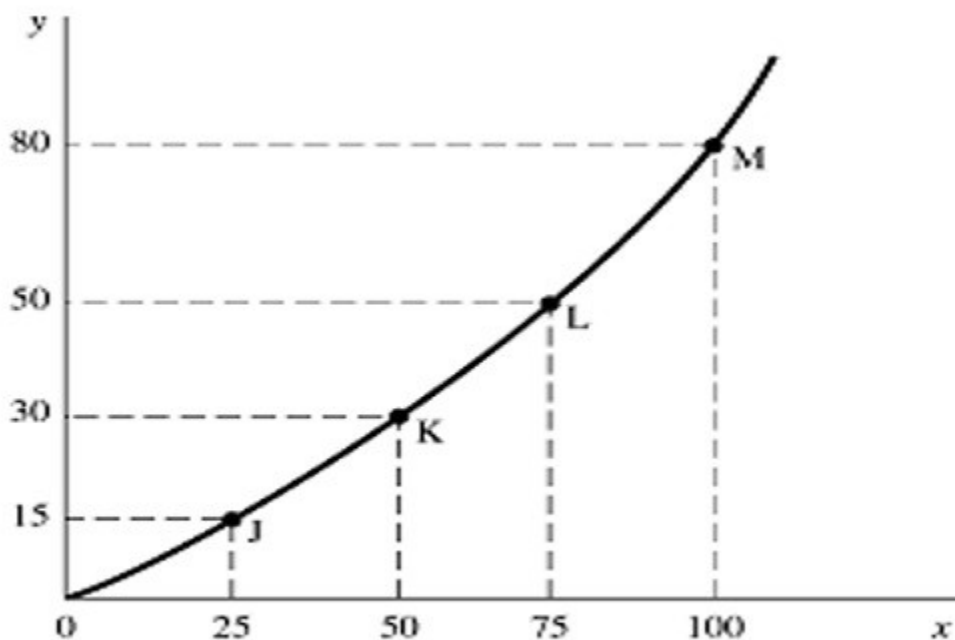
**Figure**

- Refer to the figure. The slope of the line between points L and M is
- 1.20.
  - 0.80.
  - 0.75.
  - 0.67.



**Figure**

- Refer to the figure. The slope of the line between points K and L is
- 1.25.
  - 0.80.
  - 0.75.
  - 0.60.



**Figure**

Refer to the figure. The slope of the line is  
greater at point K than at point L.

equal to zero at all points.

greater at point M than at point L.

smaller at point M than at point L.

The slope of a curve at any point is given by which formula?

the change in y coordinates between two points divided by the change in their x coordinates

the change in x coordinates between two points divided by the change in their y coordinates

the percentage change in y coordinates between two points divided by the percentage change in their x coordinates

the percentage change in x coordinates between two points divided by the percentage change in their y coordinates

A line that slopes downward from left to right has a negative slope.

positive slope.

slope that changes as you move along the curve.

slope of zero.

A linear function can be distinguished by

the continuous change in its slope.

the same slope throughout the line.

the changing relationship between the two variables.

a shift in the function.

When the relationship between two variables changes,

there is movement from one point on the curve to another point on the curve.

the curve becomes linear.

the entire curve shifts.

the curve will be upward sloping.

| Combination | Number of Good 1 | Opportunity Cost (Foregone Good 2) | Number of Good 2 | Opportunity Cost (Foregone Good 1) |
|-------------|------------------|------------------------------------|------------------|------------------------------------|
| A           | 0                | NA                                 | 212              | 6.88                               |
| B           | 117              | 0.15                               | 195              | 1.3                                |
| C           | 196              | 0.77                               | 134              | 0.08                               |
| D           | 207              | 12.18                              | 0                | NA                                 |

Refer to the table. What is the opportunity cost of each unit of Good 2 when the economy changes production from C to B?

1.3 units of Good 1..

0.77 units of Good 1..

6.88 units of Good 1..

0.15 units of Good 1..

| Combination | Number of Good 1 | Opportunity Cost (Foregone Good 2) | Number of Good 2 | Opportunity Cost (Foregone Good 1) |
|-------------|------------------|------------------------------------|------------------|------------------------------------|
| A           | 0                | NA                                 | 226              | 6.17                               |
| B           | 111              | 0.16                               | 208              | 1.40                               |
| C           | 199              | 0.72                               | 145              | 0.03                               |
| D           | 203              | 36.25                              | 0                | NA                                 |

Refer to the table. What is the opportunity cost of each unit of Good 1 when the economy changes production from A to B?

0.16 units of Good 2.

0.72 units of Good 2.

6.17 units of Good 2.

1.4 units of Good 2.

Scarcity results when available resources cannot satisfy all desired uses of those resources.

true

false

Critics of government regulation argue that government interference in the marketplace stifles the "animal spirits" of entrepreneurship.

true

false

Opportunity cost is a theoretical concept with no practical application.

true

false

Every time we use scarce resources in one way, we give up the opportunity to use them in other ways.

true

false

Production possibilities in an economy decrease as more resources and better technology are utilized.

true

false

All output combinations that lie outside a production possibilities curve are attainable with available resources and technology.

true

false

Output combinations that lie inside the production possibilities curve are characterized by efficient use of resources.

true

false

If the economy is inside the production possibilities curve, then more output can be produced using existing resources.

true

false

All economies must make decisions concerning what to produce, how to produce it, and for whom to produce.

true

false

The essential feature of the market mechanism is the price signal.

true

false

Government failure occurs when government intervention fails to improve economic outcomes or makes them worse.

true

false

Microeconomics is concerned with individual performance as well as the economy as a whole.

true

false

The Latin phrase *ceteris paribus* refers to holding other variables constant.

true

false

To calculate the slope of a line, find the vertical distance between two points and divide it by the horizontal distance between the same two points.

true

false

The slope of a production possibilities curve is positive.

true

false

When a curve shifts, the underlying relationship between the two variables has changed.

true

false

Explain why an economist would say, "There is no such thing as a free lunch."

What is the opportunity cost of you attending class on a particular day? Explain your answer.

How does the slope of a production possibilities curve reflect opportunity costs?

Describe the shape of the typical production possibilities curve and explain why it has this shape.

Why do opportunity costs increase as society produces more of a good?

Explain the concept of inefficiency in terms of a production possibilities curve.

Explain the difference between macroeconomics and microeconomics. Give examples of topics or issues that are studied in each.

How does the market mechanism answer the *what*, *how*, and *for whom* questions?

## **Answer Key**

Test name: CH1 The Macro Economy Today E17

B

B

C

B

A

B

A

D

A

B

B

D

C

C

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