

At school

**Defination:-** Economics is the study of Economics of how people and society choose to order to produce various commodities that satisfy their wants and to distribute them for consumption among various persons and groups in society.

• Economics - (What is an Economy?)

→ An economy is a system which provides people with living.

Economy is a system providing individuals with to satisfy their needs and wants. They can do consumption, investment, and exchange.

[Market place is called as economy - A place where people are providing as well as exchanging goods and services is called Economy]

~ Simple meaning :- It refers to the area where people live and earn.

• **Defination:-** An economy is a system that helps to produce goods and services and enables people to earn their living.

Enable (Allow)

• **Economic Activities**

- There are three main economic activities :-

- i) Production (Manufacturing)
- ii) Consumption (bought)
- iii) Distribution or Investment on capital formation.

Is that economic activities which studies how income generated is distributed among this **factor of production**.

**Process of Economy**

| Process   | Production | Consumption | Investment         | Exchange   |
|-----------|------------|-------------|--------------------|--|
| Subpoints | goods      | Households  | Savings            | Domestic Trade (within the country)                  |
|           | Services   | Businesses  | Business expansion | International Trade, Transfer of Ownership (Foreign) |

**Four Factors of Production**

There are Four factors of Production

**Land, Labour, Capital & Enterprise**

Non-economic activities

• Activities which are not concerned with creation of money or wealth are known as Non-economic activities.

Eg - A mother teaching her son.

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where people are providing as well as exchanging

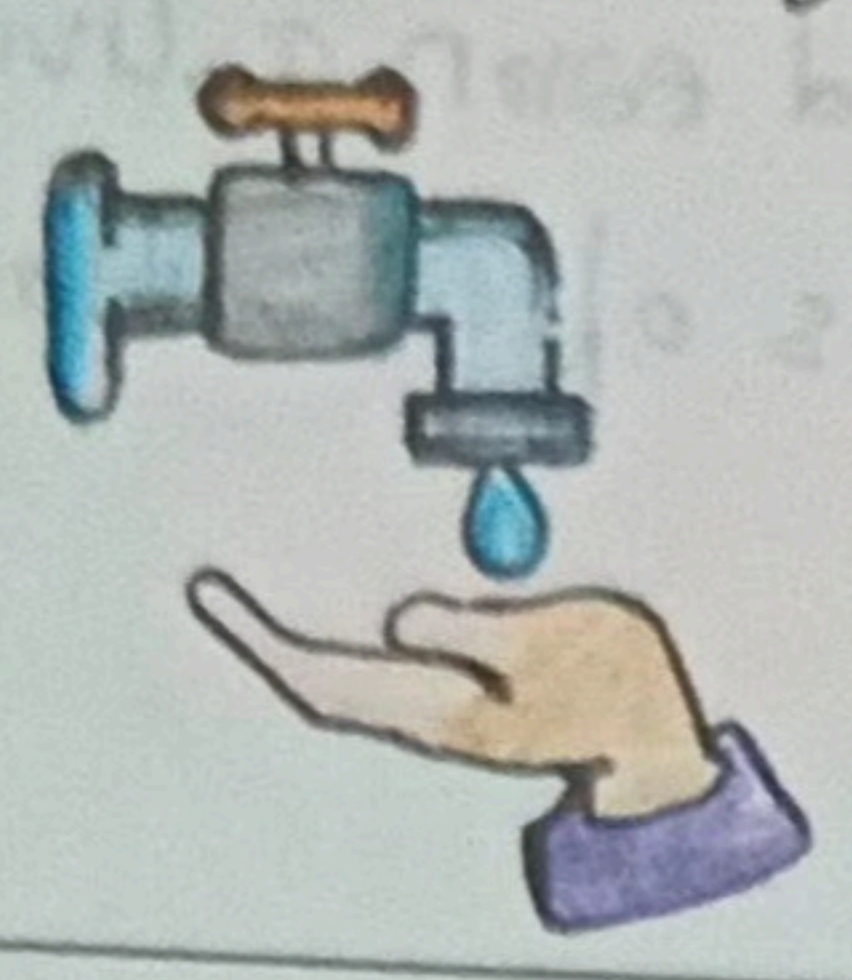
where people live and earn.

conomic Activities

It refers to the limitation of supply in relation to the demand of a commodity where resources are scarce - the demands are unlimited and the resources have alternative uses.

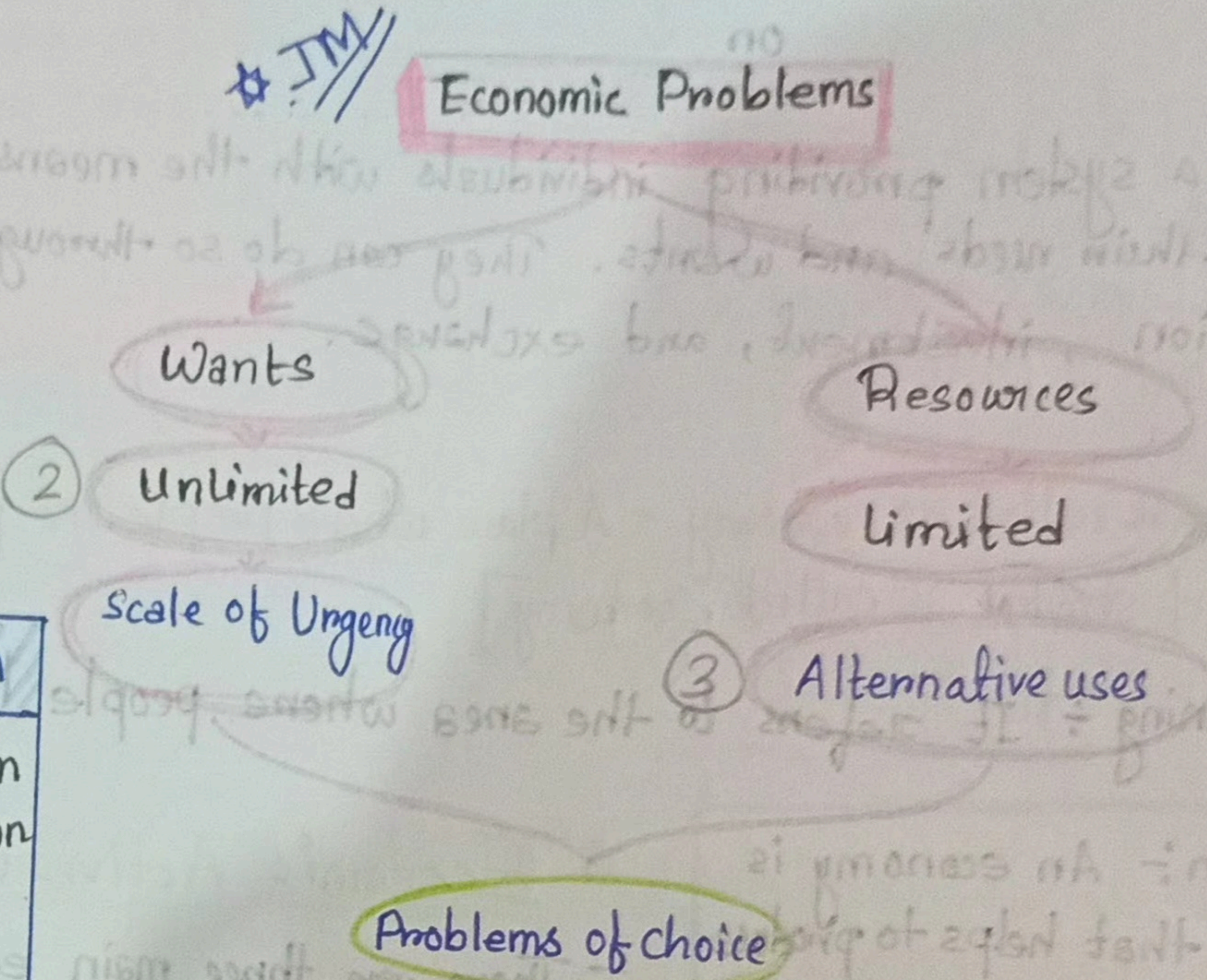
SCARCITY (Limited)

A condition that exists when there are not enough goods or services available to meet the wants and needs of consumers.



Why study Economics?

The main reason for study of economics can be simplified to a single word - Scarcity.



Defination of Economic Problem

Economic problem is a problem of choice, involving satisfaction of unlimited wants out of limited resources having alternative uses.

Meaning of Economics -

Economics is a social science that studies the way a society chooses to use its limited resources, which have alternative uses, to produce goods and services and to distribute them among different groups of people.

- Allocate (distribute) resources under conditions of scarcity.

Central Problems of an economy

These problems are called central problems because these are the basic problems of an economy and all other problems revolve around them.

- Three fundamental questions under central Problems are -
  - What to produce?
  - How to produce it?
  - Who to produce it for?

Central problem in economy deals with making choices between these three questions.

As resources are available in scarce an economy always suffers from this problems in economy -

| What to produce?  | How to produce?   | For whom to produce  |
|---|---|--|
| Deciding to allocate resources for production between different goods like necessary/luxury goods, etc. | Deciding the techniques for producing goods like labor intensive or capital intensive or a mix of both. | Deciding between different class of the society such as producing for rich or poor, etc. |

• The problem of ① 'What to Produce' has two aspects:-

- (A) What possible commodities to produce
- (B) How much to produce (in what quantity)

② How to Produce?

This problem refers to selection of technique to be used for production of goods and services.

Labour intensive techniques (LIT) and capital intensive technique, more labour and less capital is used.

• In capital intensive technique, there is more

③ For whom to Produce?

This problem relates to the distribution of produced goods and services among the individuals within the economy, i.e. Selection of the category of people who will ultimately consume the goods, i.e. whether to produce goods for more poor and less rich or more rich and less poor.

Since resources are <sup>(less)</sup> scarce in every economy, no society can satisfy all the wants of its people. Thus, a problem of choice arises.

Goods are produced for those people who have the paying capacity. The capacity of people to pay for goods depends upon their level of income. It means, this problem is concerned with distribution of income among the factors of production (Land, Labour, capital and enterprise), who contribute in the production process.

### ★ Opportunity Cost:

As resources are scarce, the society is always forced to make choices. To produce more of one good, a certain amount of other goods has to be sacrificed.

Hence, Opportunity Cost is the cost of next best alternative foregone. (another option)

eg -  $\rightarrow$  A person has three job option & he choose (b)

a) 40,000 salary  $\rightarrow$  Best alternative (opp cost)

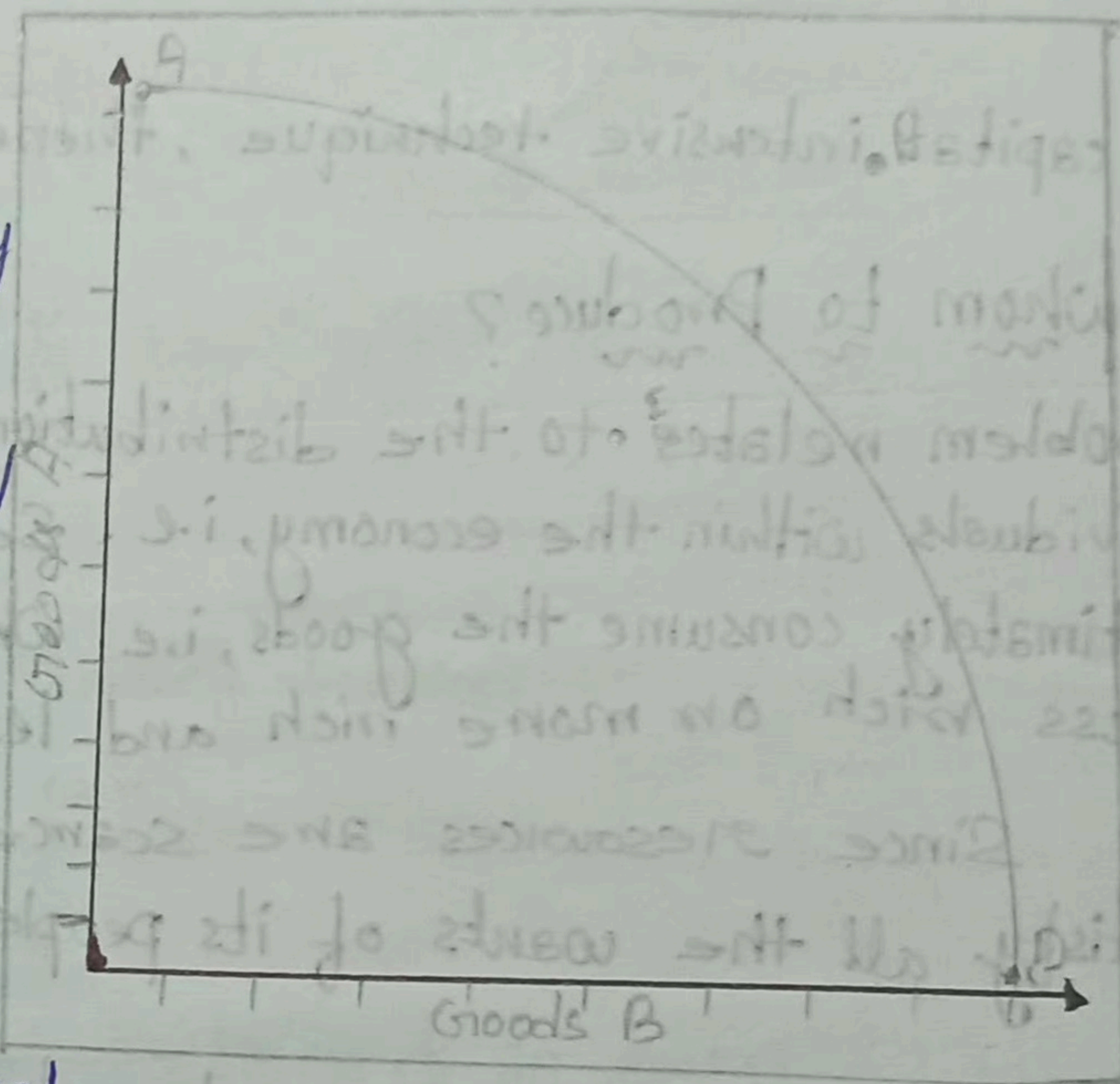
b) 50,000 "

c) 30,000 "

## ★ Production Possibility Frontier (PPF):

As resources are limited, we can't have everything we want. We must choose which goods and services to produce to best meet our needs. Thus, society has to decide what to produce from an infinite range of possibilities.

Production Possibility Frontier (PPF) refers to graphical representation of possible combinations of two goods that can be produced with given resources and technology. Alternately, PPF is the locus of various possible combinations of two goods that can be produced with given resources and technology.



## ★ Assumptions for PPF - Production possibility frontier is based on the following assumptions:

1. Resources are fixed but can be transferred between uses.

2. The technology level is constant.

3. Only two goods can be produced with given resources and ~~tech~~ technology.

4. Resources are fully and efficiently utilized.

5. Resources are not equally efficient for all products, leading to decreased productivity when transferred.

## • Marginal Opportunity Cost (MOC)

Marginal - Addition / one additional unit.

Refers to the number of units of a commodity sacrificed to gain one additional unit of another commodity. In case of PPF, MOC is always increasing, more and more units of a commodity have to be sacrificed to gain an additional unit of another commodity.

$$MOC = \text{Ratio MRT}$$

$\Delta = \text{change}$

## • Marginal Rate of Transformation (MRT)

MRT is the ratio of number of units of a commodity sacrificed to gain an additional unit of another  $\Delta$  units sacrificed,  $\Delta$  units Gained Commodity.

$$MRT = \frac{\Delta \text{ unit Sacrificed}}{\Delta \text{ unit Gained}}$$

In the given example of guns and butter,  $MRT = \frac{\Delta \text{ Guns}}{\Delta \text{ Butter}}$

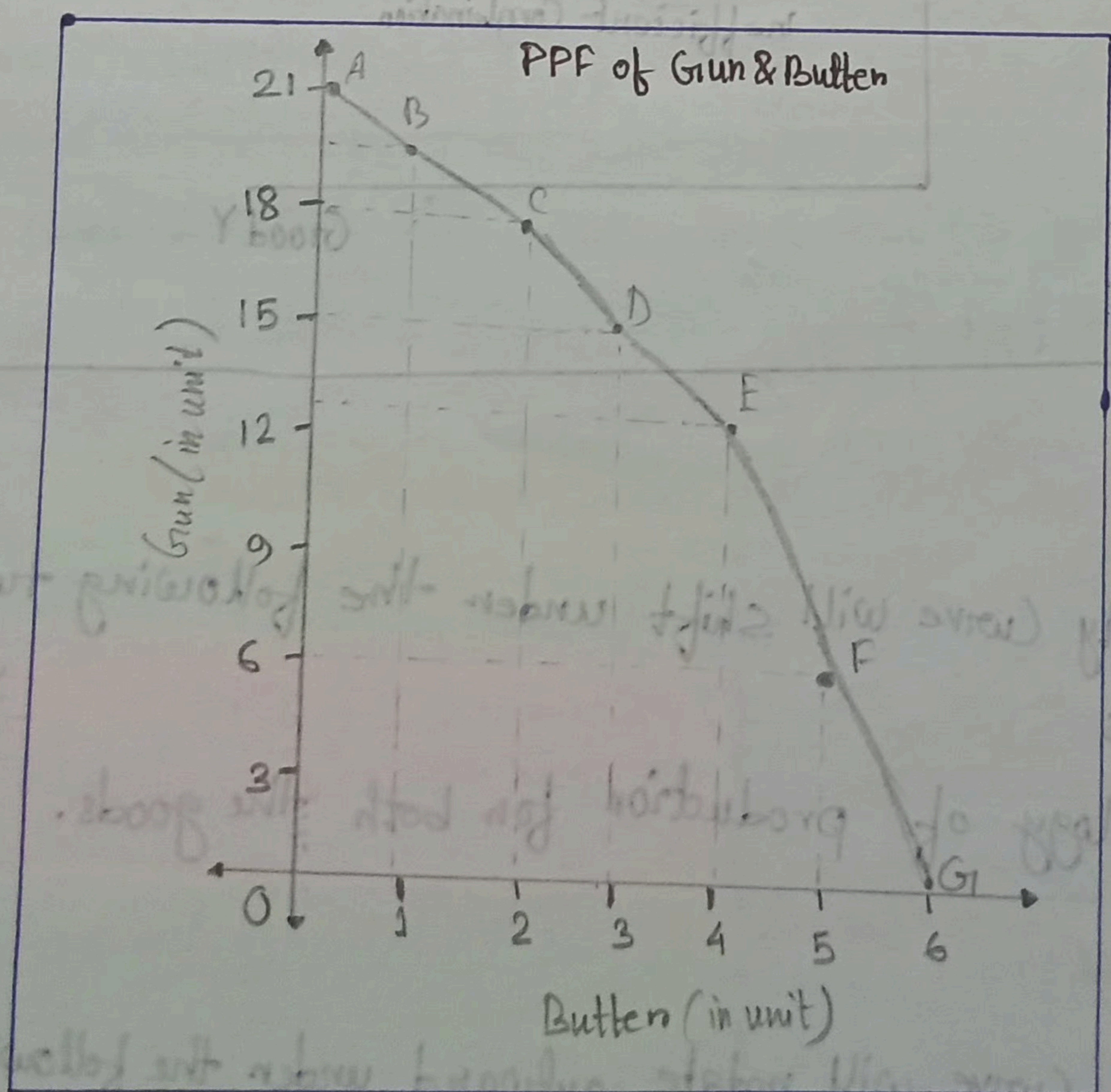
Table: Production Possibility Schedule

| Possibilities | Guns (in units) | Butten (in units) | MOC | MRT = $\Delta \text{Guns} / \Delta \text{Butten}$ |
|---------------|-----------------|-------------------|-----|---|
| A             | 21              | 0                 |     |   |
| B             | 20              | 1                 | 1   | 1G : 1B   |
| C             | 18              | 2                 | 2   | 2G : 1B   |
| D             | 15              | 3                 | 3   | 3G : 1B   |
| E             | 11              | 4                 | 4   | 4G : 1B   |
| F             | 6               | 5                 | 5   | 5G : 1B   |
| G             | 0               | 6                 | 6   | 6G : 1G   |

Table shows the various possibilities of guns and butten. This data is graphically represented in Fig.

PPC = Concave (curve)

When points A, B, C, D, E, F, G are joined, we get a curve AG, known as 'Production Possibility Frontier'. AG Curve shows the maximum limit of production of guns and butten.



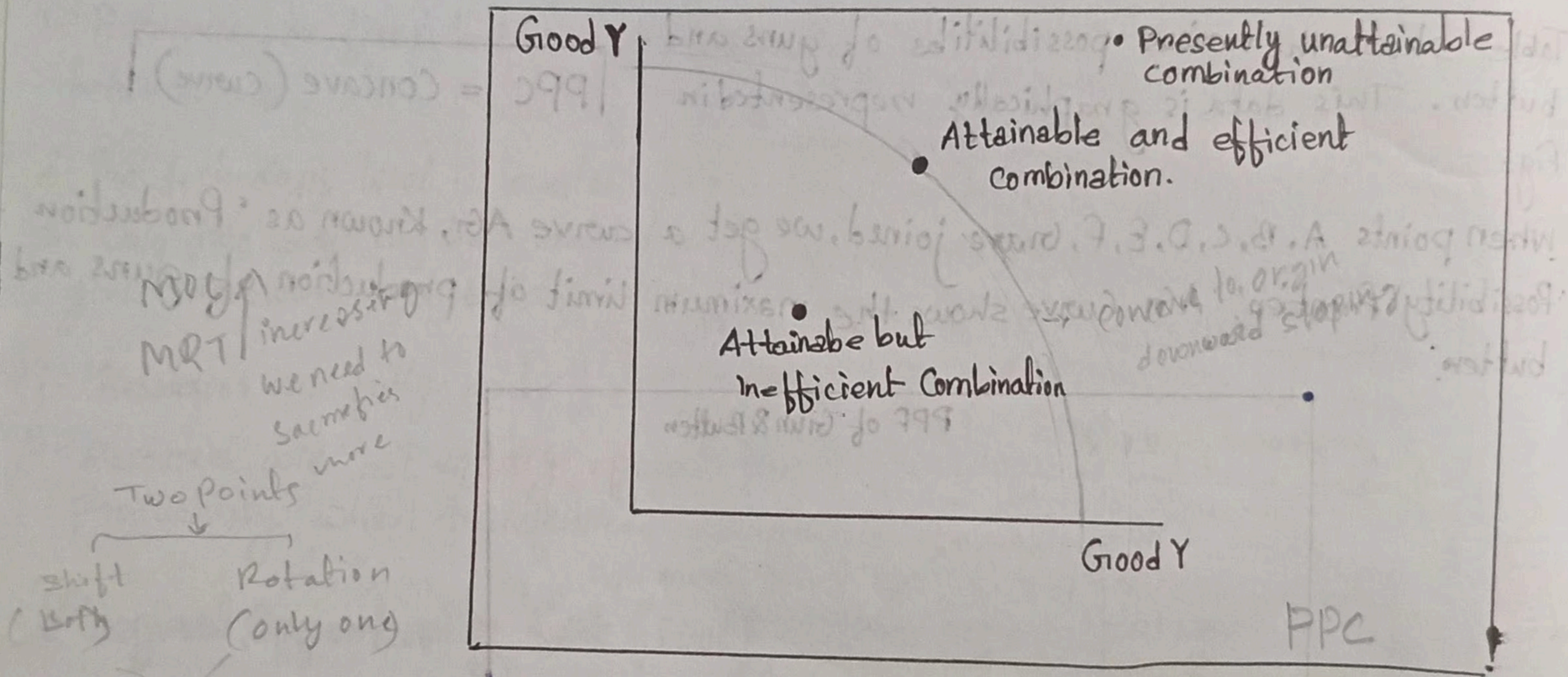
Shift in PPC

Rotation of PPC

# Characteristic or Properties of PPF

1. PPF slopes Downwards: The PPF shows the maximum possible combinations of two goods with available resources and technology. Producing more of one good requires producing less of another, creating a downward slope from left to right.
2. PPF is Concave: The PPF is concave due to increasing marginal rate of transformation (MRT), meaning more units of one good must be sacrificed to gain additional units of another.

## Attainable and Unattainable combinations

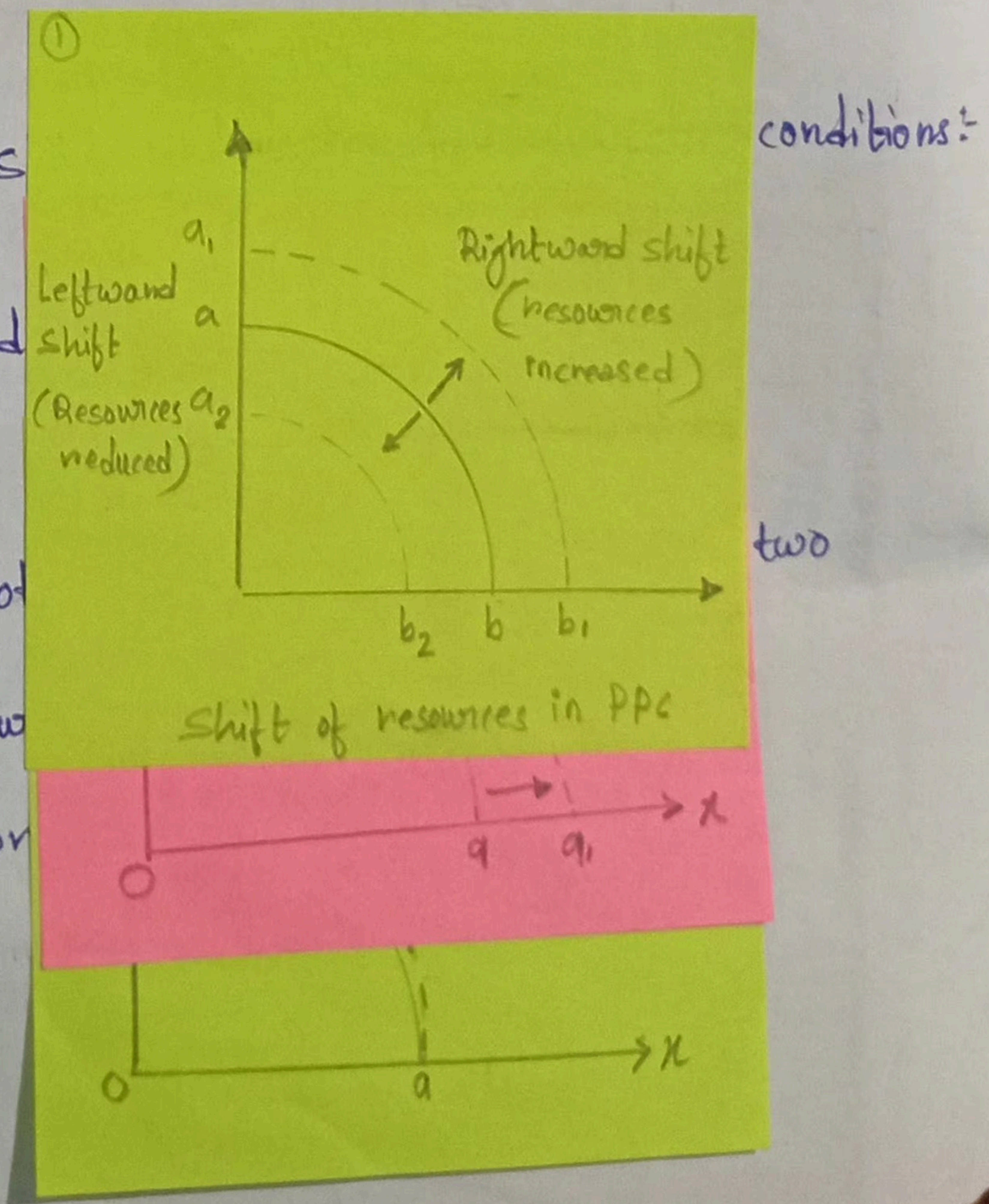


### Shift in PPC (Both)

- The Production Possibility Curve will shift under the following conditions:
- 1) change in resources.
  - 2) change in technology of production.

### Rotation of PPC (only)

- The Production Possibility Curve will rotate under the following conditions:
- 1) Improvement in technology in favour of one good.
  - 2) Growth of resources for the production of one good.



## Practicals on PPF:-

Q1:- Calculate the marginal opportunity cost (MOC) of commodity A for the given combinations

|             |    |    |    |   |   |   |
|-------------|----|----|----|---|---|---|
| Commodity A | 0  | 1  | 2  | 3 | 4 | 5 |
| Commodity B | 15 | 14 | 12 | 9 | 5 | 0 |

Sol:->

|             |    |    |    |   |   |   |
|-------------|----|----|----|---|---|---|
| Commodity A | 0  | 1  | 2  | 3 | 4 | 5 |
| Commodity B | 15 | 14 | 12 | 9 | 5 | 0 |
| MOC         | -  | 1  | 2  | 3 | 4 | 5 |

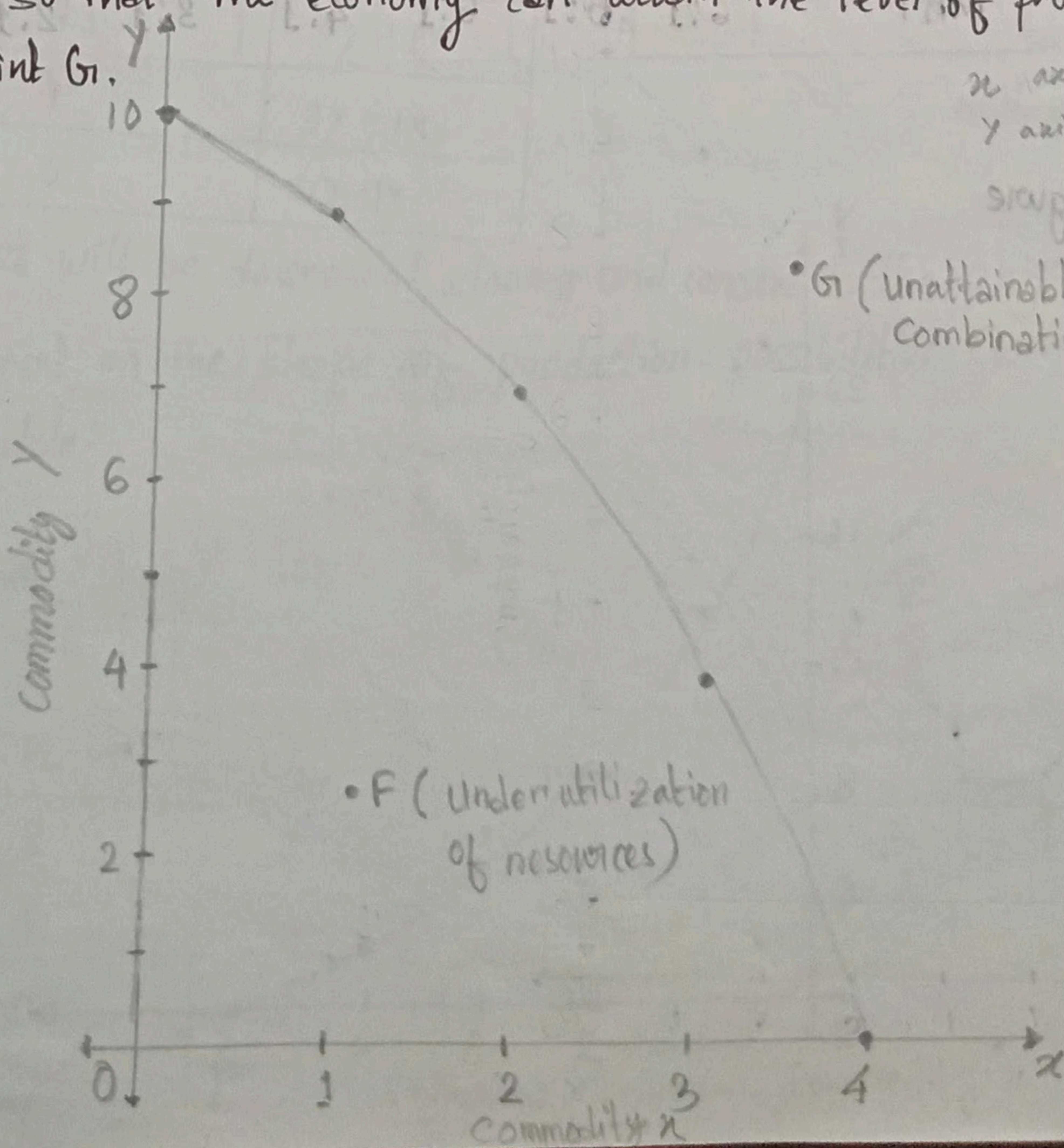
When my MOC increases the slope will be downwards

Q2. The following table depicts the production possibilities of commodities X and Y:

|             |    |   |   |   |   |
|-------------|----|---|---|---|---|
| Possibility | A  | B | C | D | E |
| Commodity X | 0  | 1 | 2 | 3 | 4 |
| Commodity Y | 10 | 9 | 7 | 4 | 0 |

- Show these production possibilities through PPF. What do the points on the curve indicate?
- Label a point F inside the curve. What does this point indicate?
- Label a point G outside the curve. What does this point indicate?
- What must occur so that the economy can attain the level of production as indicated by point G.

Soln:->



- a) The given diagram shows all the production possibilities given in the table. Points on the curve (A to E) indicate that there is full utilization of resources;
- b) Point F inside the curve indicates underutilization of resources;
- c) Point G outside the curve indicates an unattainable combination;
- d) Economy can attain the level of production as indicated by point G, only when there is an increase in resources or an improvement in technology with respect to both commodities X and Y.

Q3. A country produces two commodities: X and Y. Its production possibilities are shown in the following table:

| Possibility | A  | B  | C | D | E | F |
|-------------|----|----|---|---|---|---|
| Commodity X | 20 | 14 | 9 | 5 | 2 | 0 |
| Commodity Y | 0  | 1  | 2 | 3 | 4 | 5 |

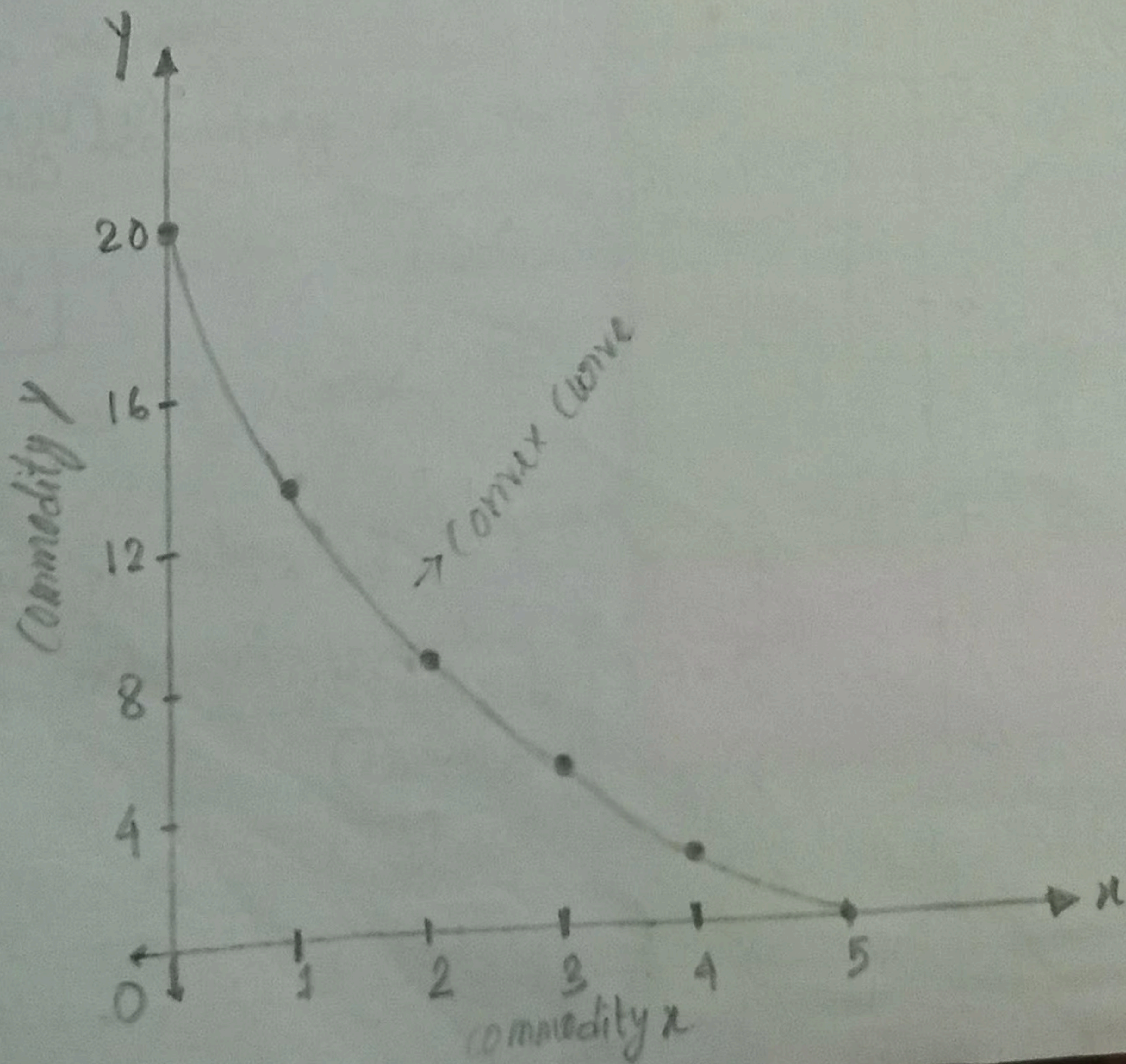
- a. Calculate marginal rate of transformation (MRT);
- b. Construct a PPF with the help of the various possibilities;
- c. Comment on the shape of PPF along with its reason.

Soln: → a)

| Possibility | A  | B   | C   | D   | E   | F   |
|-------------|----|-----|-----|-----|-----|-----|
| Commodity X | 20 | 14  | 9   | 5   | 2   | 0   |
| Commodity Y | 0  | 1   | 2   | 3   | 4   | 5   |
| MRT         | -  | 5:1 | 5:1 | 4:1 | 3:1 | 2:1 |

→ To get this we need to find out MOC

b) Figure



When MOC decreases ↓ the curve will be convex

→ convex to the origin

MRT =  $\frac{\Delta \text{ sacrifice}}{\Delta \text{ gain}}$

C. PPF  
Com

For u

3 si

Q4. G

b

Solution

As

Q5. G

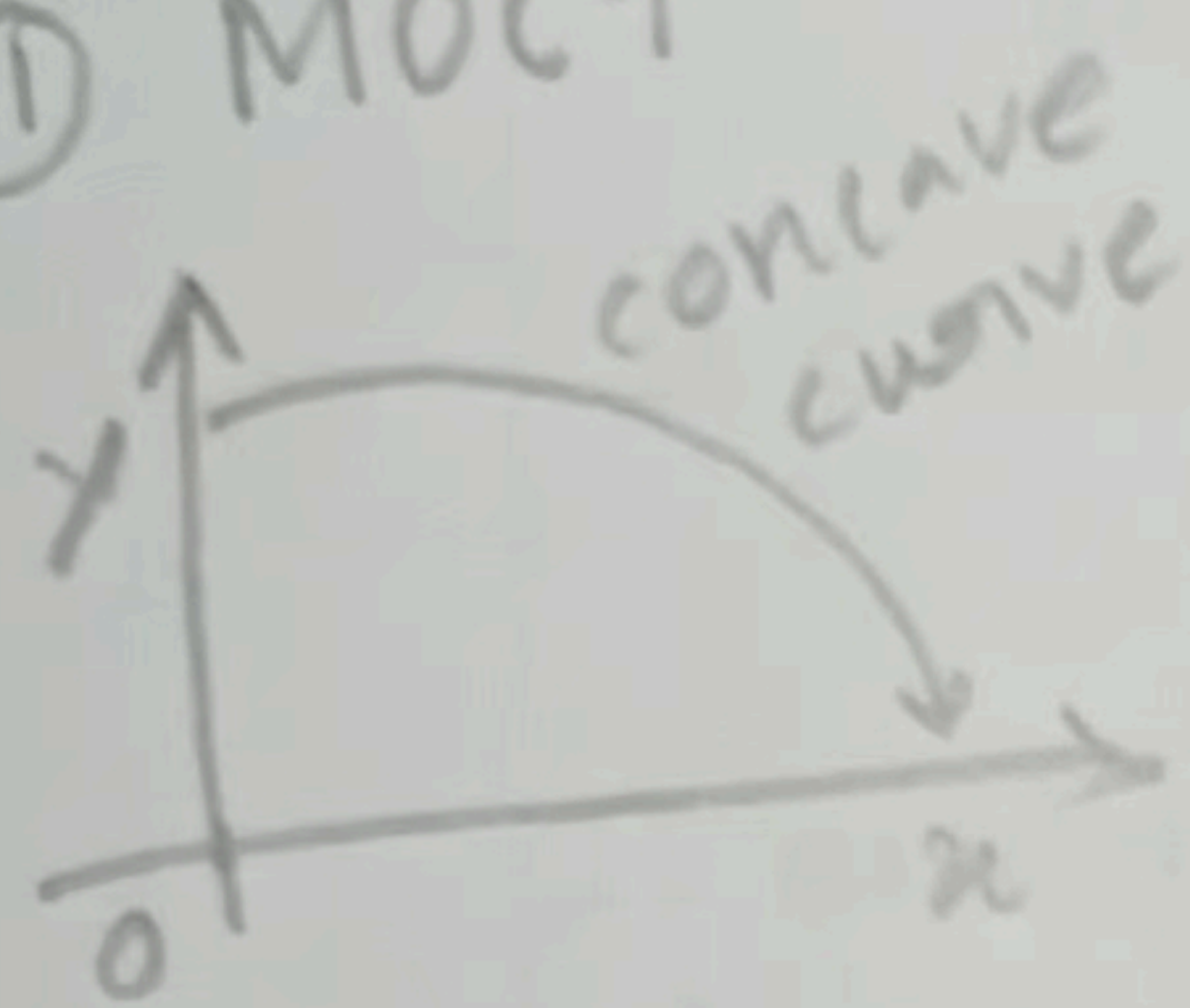
on

C. PPF is convex shaped due to decreasing MRT, i.e. less and less units of commodity Y are sacrificed to gain an additional unit of commodity X.

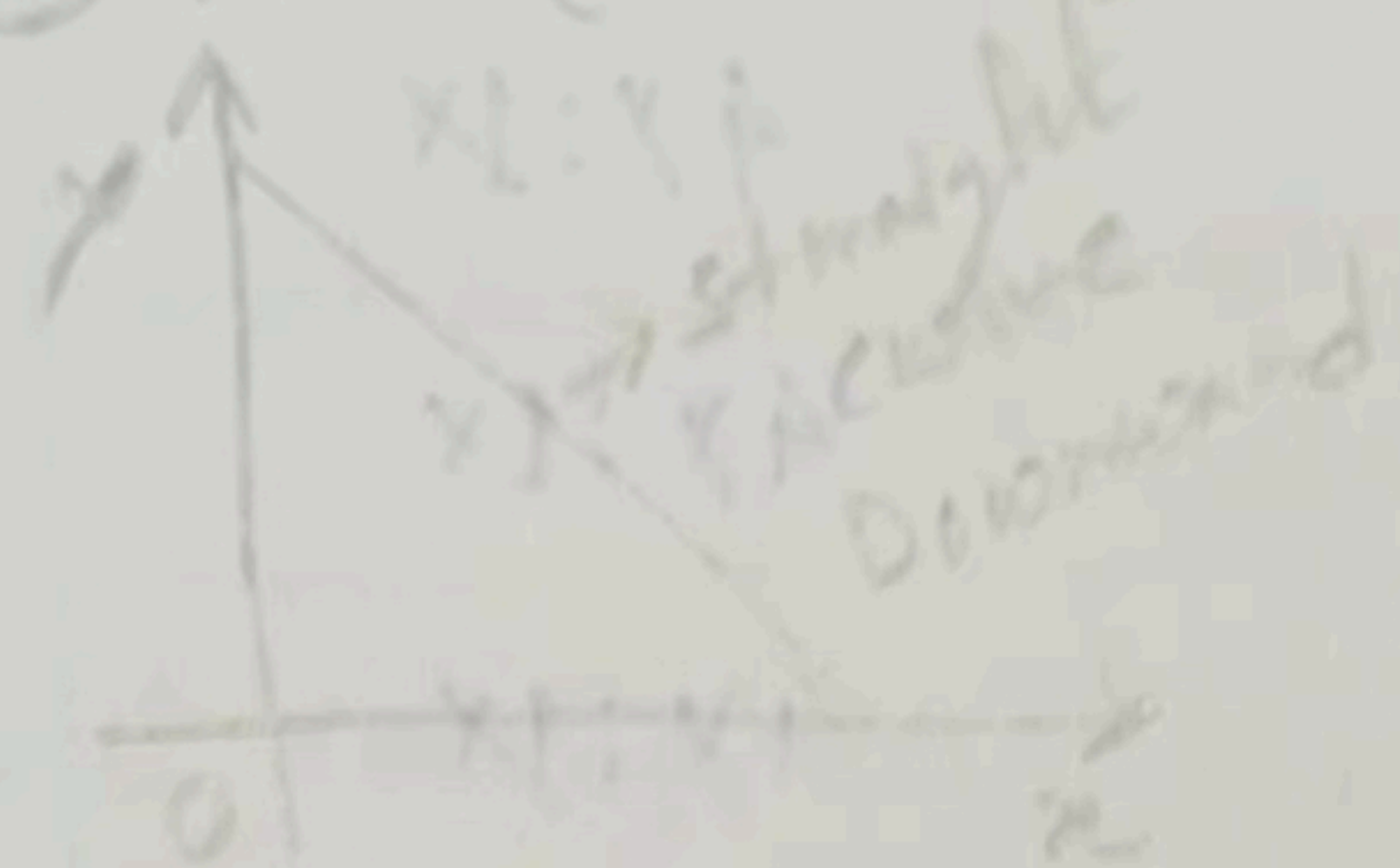
For understanding

3 situation.

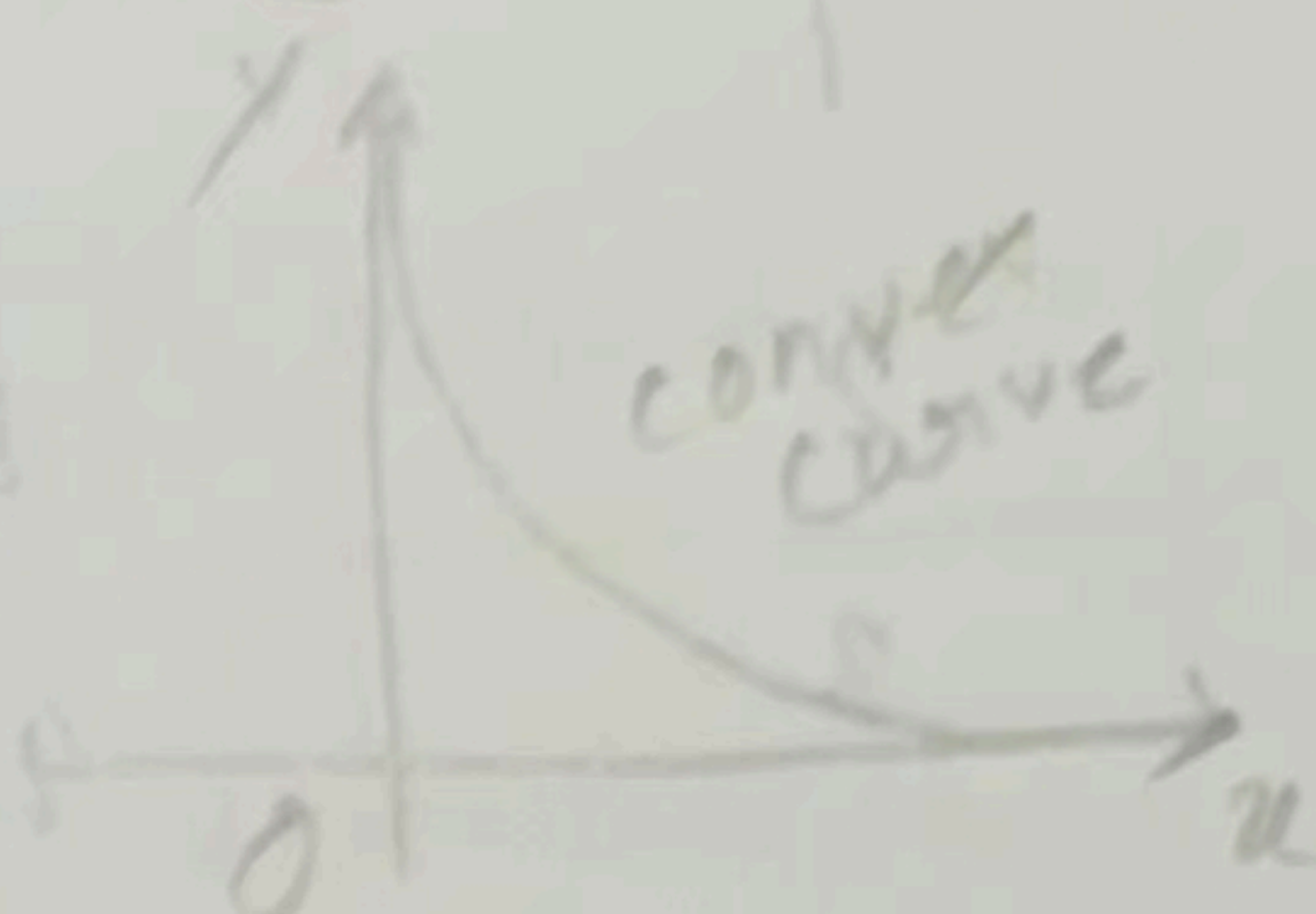
①  $MOC \uparrow$



②  $MOC$  (constant)



③  $MOC \downarrow$



Q4. Giving reason, comment on the shape of production possibilities curve based on the following schedule:

| Good X (units) | Good Y (units) |
|----------------|----------------|
| 0              | 10             |
| 1              | 9              |
| 2              | 7              |
| 3              | 4              |
| 4              | 0              |

Solution  $\Rightarrow$

| Good X (units) | Good Y (units) | MRT     |
|----------------|----------------|---------|
| 0              | 10             | -       |
| 1              | 9              | 1Y : 1X |
| 2              | 7              | 2Y : 1X |
| 3              | 4              | 3Y : 1X |
| 4              | 0              | 4Y : 1X |

As MRT is increasing, PPF will be downward sloping and concave to the origin.

Q5. Giving reason comment on the shape of production possibilities Curve based on the following schedule:

| Good X (units) | Good Y (units) |
|----------------|----------------|
| 0              | 16             |
| 1              | 12             |
| 2              | 8              |
| 3              | 4              |
| 4              | 0              |

rough

MOC

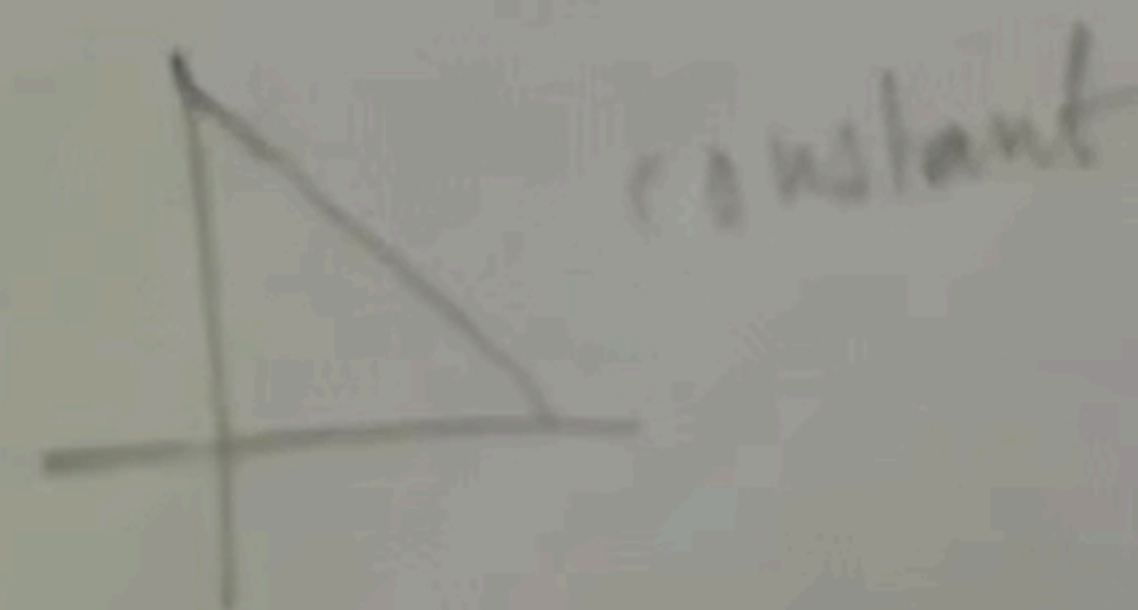
4

4

4

4

4

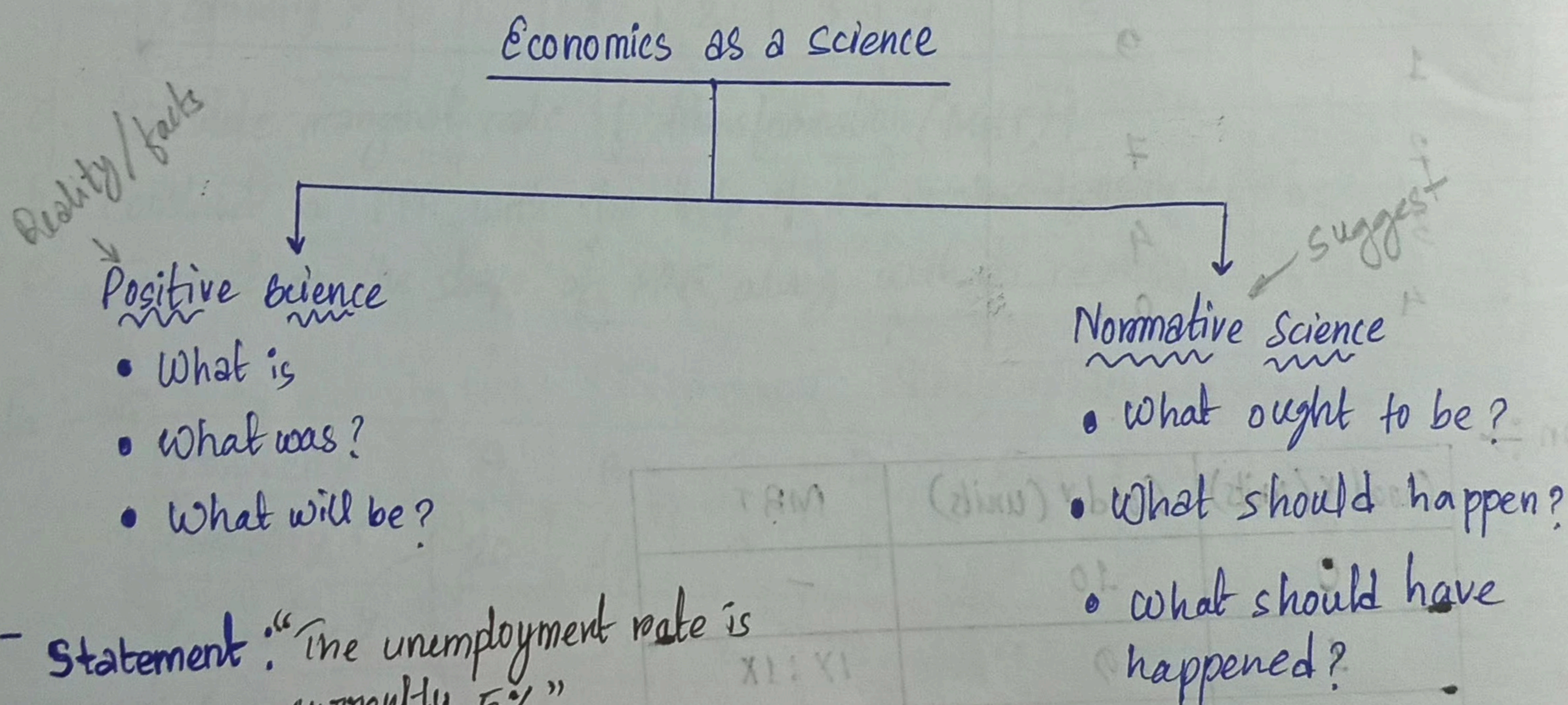


Solution  $\rightarrow$

| Good X (units) | Good Y (units) | MAT   |
|----------------|----------------|-------|
| 0              | 16             | -     |
| 1              | 12             | 4Y:1X |
| 2              | 8              | 4Y:1X |
| 3              | 4              | 4Y:1X |
| 4              | 0              | 4Y:1X |

Since MAT is constant, PP curve will be downward sloping straight line.

## Positive Economics & Normative Economics



Eg - Statement: "The unemployment rate is currently 5%."

Explanation: This is a verifiable fact based on current data.

Eg - Statement: "The unemployment rate should be lower to improve the economy."

Explanation: This is a value judgment about what is desirable for the economy.

macroeconomics: It is that part of economic theory, which studies the behavior of aggregates of the economy as a whole.

Ex - Aggregate demand & Aggregate supply.

Marginal - one additional unit

## Difference between Positive Economics and Normative Economics

| Basic            | Positive Economics   | Normative Economics   |
|------------------|--|---|
| Meaning          | It deals with what is or how the economic problems are actually solved.  | It deals with what ought to be or how the economic problems should be solved.   |
| Verification     | It can be verified with actual data  | It cannot be verified with actual data  |
| Purpose          | It aims to make real description of an economic activity.  | It aims to determine the ideals.  |
| Suggestive       | It is based upon facts and thus, not suggest   | It is based upon individual opinion and therefore, it is suggestive in nature.  |
| Value Judgements | It does not give any value judgements, i.e. It is neutral between ends.  | It gives value judgements   |
| Examples         | <ol style="list-style-type: none"> <li>Prices in Indian economy are constantly rising</li> <li>There are inequalities of income in our economy.</li> </ol> | <ol style="list-style-type: none"> <li>India should take steps to control rising prices.</li> <li>Income inequalities should be reduced.</li> </ol> |

## Microeconomics and Macroeconomics:

individual household firm

National income government Nations/world

i.e. = that is

1. Microeconomics (Price Theory)

2. Macroeconomics (Income Theory)

• In Microeconomics, the letter 'I' stands for 'individuals', i.e. it studies the economic.

• In Macroeconomics, the letter 'A' stands for 'Aggregates', i.e. it studies the economy as a whole.

\* The father of economics — Adam Smith, founder of microeconomics field. The term 'micro' has been derived from ~~the~~ greek word 'mikros' which means ~~small~~ 'small'. Studies with behaviour & economic actions of small and individual units of the economy, like a particular consumer, a firm or a small group of individual units.

It's a part of that economic theory, which studies the behaviour of individual units of an economy. eg, individual income, individual output, price of a commodity, etc. Its main tools are Demand and supply.