DEMAND

Quantity demanded: "of any good is amount of goods that buyers are willing and able to purchase".

On economics, the word demand is used in three senses.

(i) Demand is the effective desire to buy something.
Demand = Desire + purchasing power.

(ii) Demand indicates quantity actually bought at a particular price during a period of time.

(iii) Demand is a schedule (or table) showing inverse relation between price and quantity bought.

"Law of Demand"

→ Quantity demanded of a good falls ↓ → when the price of good rises ↑.

"If other things do not change, people buy more of a good when its price falls and less of it when its price rises."

→ Law of demand can be shown in form of demand schedule or a demand curve.

Demand Schedule :

A demand schedule shows the quantities of a commodity which buyers are willing and able to buy at various prices.

Table

DEMAND SCHEDULE

PRICE OF SUGAR (Rs./Kg)	QUANTITY DEMANDED (Kg)
80	200
70	300
60	400
50	500
40	600
30	700

⇒ From this table we see,

As Price ↓ falls → demand ↑ expands.

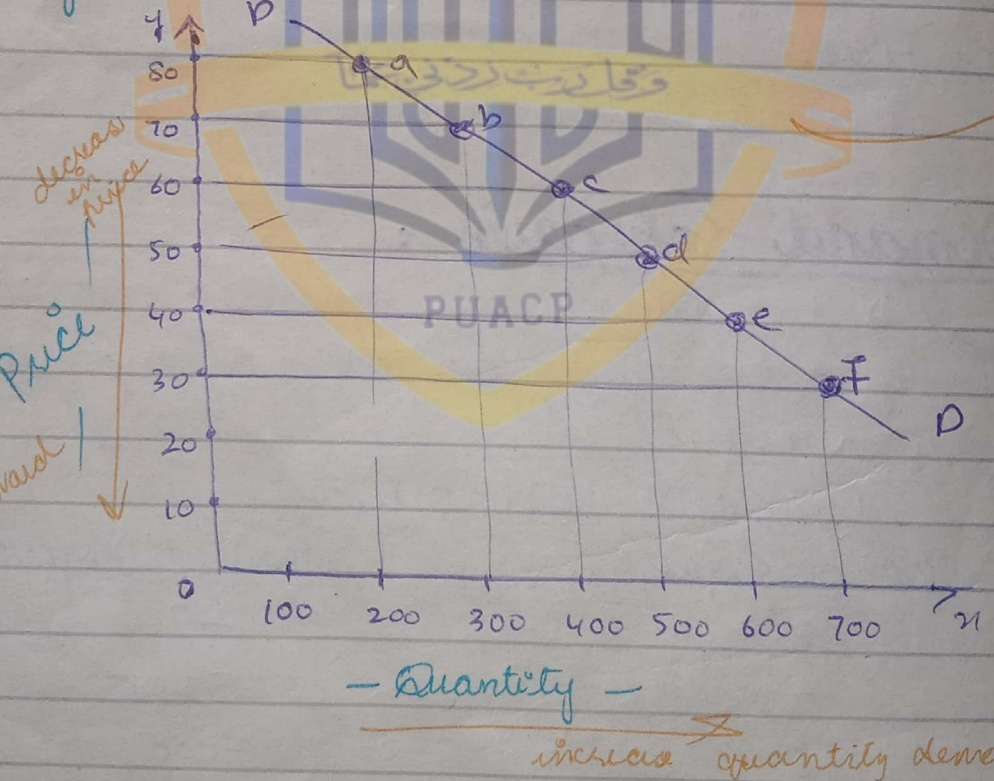
Def

"Demand schedule is a table that shows the relationship between the price of good and the quantity demanded."

Demand Curve :

"Demand Curve is a graph showing the inverse relationship between the price of good and the quantity demanded."

Graph



⇒ Each point of a demand curve relates a particular quantity demanded to a price if consumers expect that price to continue.

ASSUMPTIONS

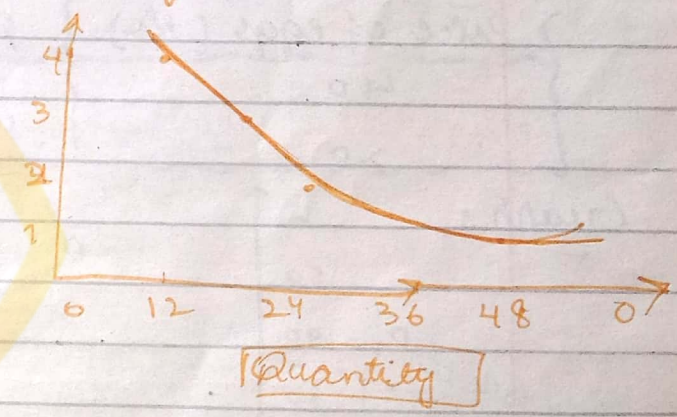
Some Assumptions of law of demand are follows:

1. Income of a consumer doesn't change.
2. Tastes of buyers do not change
3. Prices of related goods remain the same.
4. Population doesn't increase.
5. There is no change in expectations.
6. Quantity of money.

Shape of demand curve

demand curve is in straight line because it is convenient. In relatity, it is more likely to be a curved line conver to origin. e.g

P	4	3	2	1
Q	12	16	24	48



"Changes In Demand"

A change in any factor can bring about change in the quantity demanded. We classified changes in demand into two types.

(a) EXTENSION & CONTRACTION of demand showing influence of price changes. (i.e. movement along demand curve).

(b) RISE AND FALL in demand showing influence of changes in other factors. (i.e. shift in demand curve)

EXTENSION AND CONTRACTION:

means the variation in quantity demanded because of changes in price.

⇒ When price of a commodity decreases, people buy more quantity of it. This is called "extension of demand". Price ↓ → Q_A ↑

⇒ If price increases, people buy less quantity. This is called "contraction of demand". Price ↑ → Q_A ↓

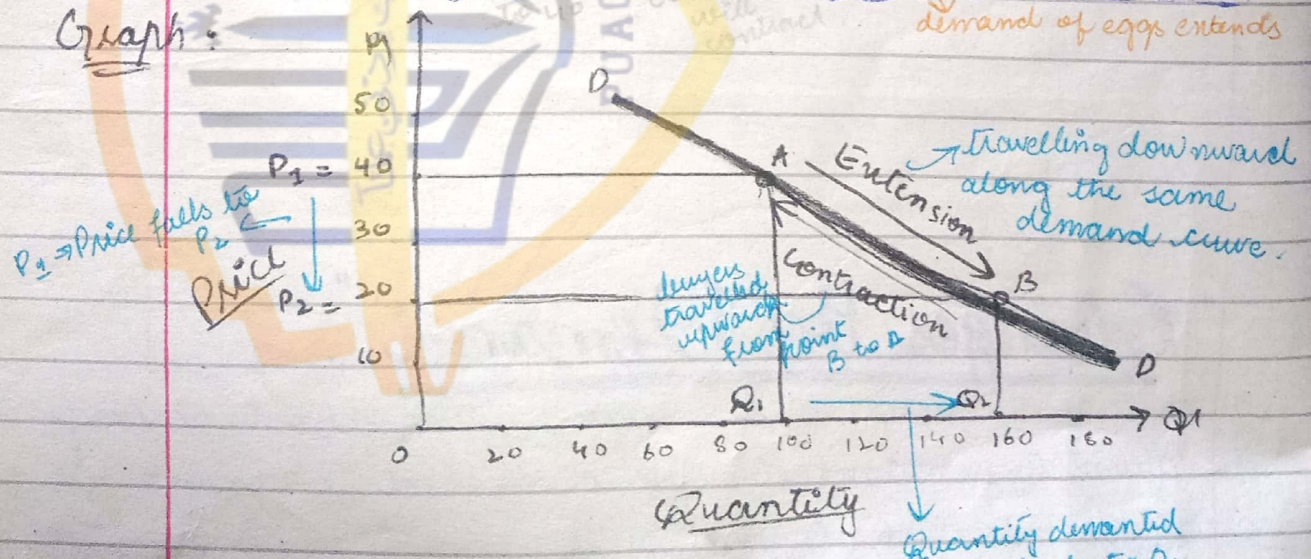
In case of extension or contraction, the demand schedule and demand curve donot change. The buyers moves up or down the same curve.

Demand Table:

Price of eggs (Rs)	Quantity demanded (dozens)
40	100
Price goes down ↓	contraction ↑
20	160 ↓ extension

demand of eggs extends

Graph:



RISE AND FALL OF DEMAND (or Shift in Demand Curve)

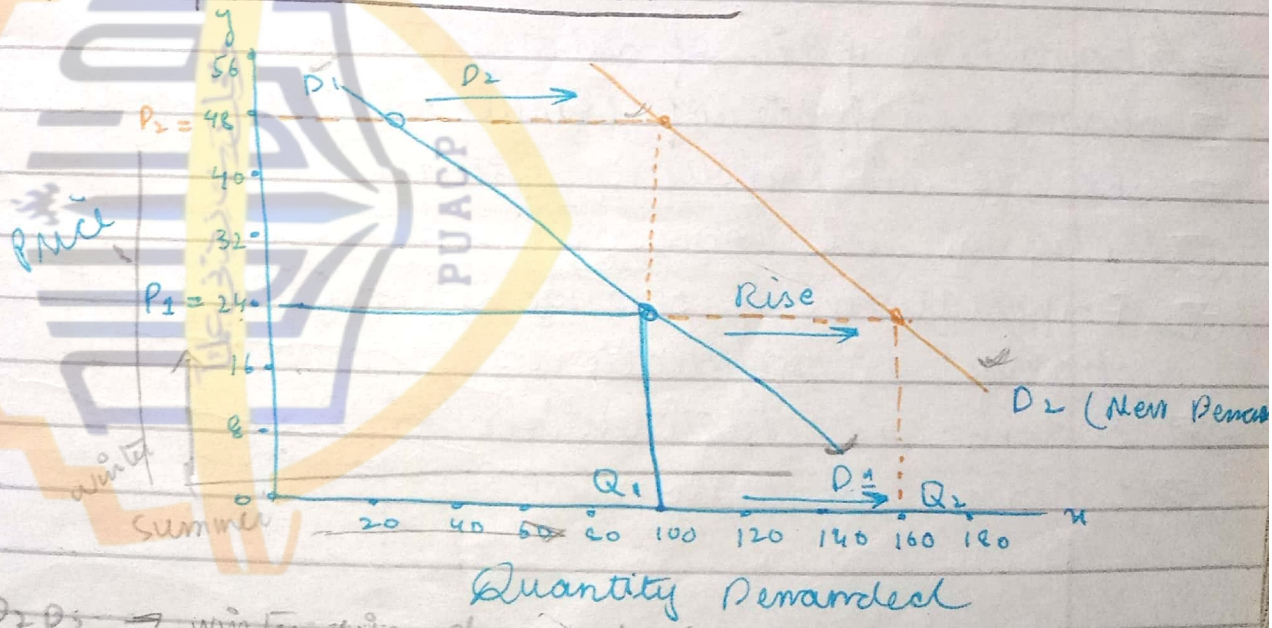
RISE IN DEMAND

When demand for a commodity goes up or down, not due to price but due to other factors, the change is called rise (or increase) in demand and fall (or decrease) in demand. In such a case the whole demand schedule changes and demand curve shifts.

Table for Rise in Demand

Price of eggs (Rs./dozen)	Original demand in summer (dozens per day)		Increase demand in winter (dozens per day)
48	40		100
40	60		120
32	80	Rise →	140
24	100		160
16	120		180

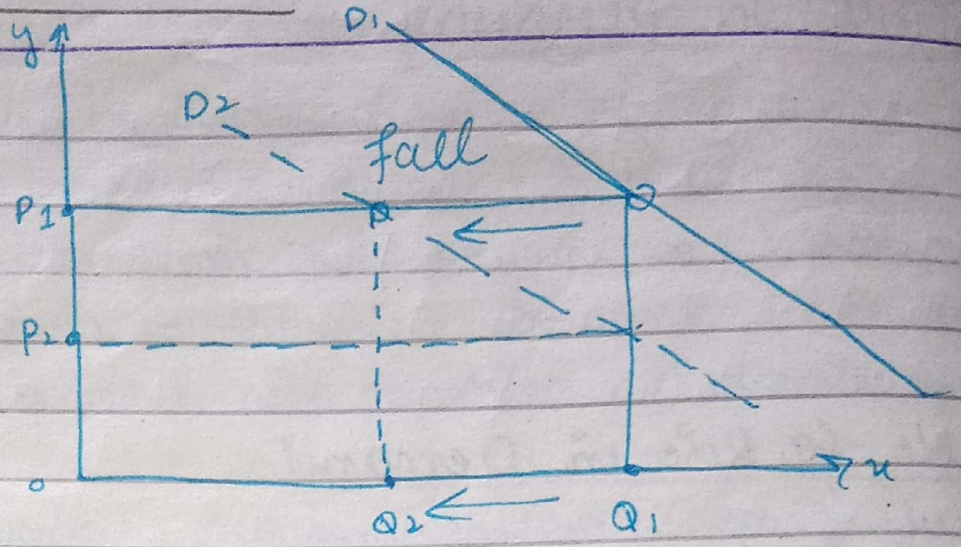
Graph of Rise in Demand



D_2D_2 → winter rises demand position

D_1D_1 → original demand in summer

FALL IN DEMAND



e.g When a cricket match becomes dull and uninteresting, the number of tickets sold may not increase even if the price is reduced.

"Reasons for Shift in Demand"

- change in price of substitutes goods.
- change in price of complementary goods.
- change in consumer income.
- change in consumer taste.
- Expectations of change in price of future
- change in population.
- change in distribution of income.
- change in season.

Two Ways to look at Rise in Demand

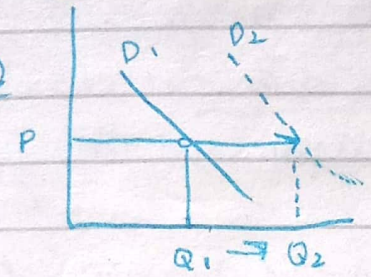
(a) More Qd at same price

P	Q
4	100
4	150

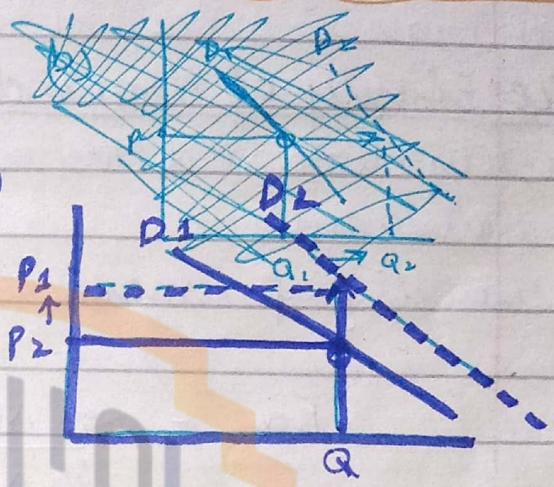
(b) Same Qd at more price

P	Q
4	100
8	100

(a)



(b)



Two Ways to look at Fall in Demand.

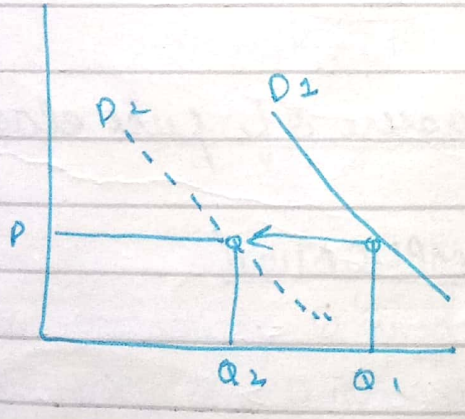
(a) Less Qd at same price

P	Q
4	100
4	50

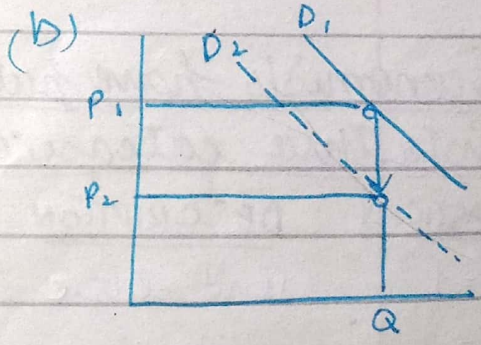
(b) Same Qd at less price

P	Q
4	100
2	100

(a)



(b)



"Elasity of Demand":

Elasticity is a measure of the responsiveness of quantity demanded or quantity supplied to the change in one of its determinants.

Elasity of demand is used to measure the effect of changes in price on quantity demanded.

Price Elasity of demand measures how much the quantity demanded responds to changes in the price of that good.

Price elasticity of demand = $\frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$.

$$Ed = \frac{\%\ \Delta Q}{\%\ \Delta P}$$

For Example:

Suppose that a 10 percent increase in price of an ice-cream cone causes the amount of ice cream you buy to fall by 20 percent. We calculate elasticity of demand as:

Price elasticity of demand = $\frac{20\%}{10\%} = 2$.

Economists have put the measure of price elasticity into three categories.

ELASTICITY	DESCRIPTION	IMPLICATION
$e = 1$	Unit elastic	% change in Q = % change in P
$e > 1$	Elastic	% change in Q > % change in P
$e < 1$	Inelastic	% change in Q < % change in P.

Income Elasticity of Demand

"It is the rate of responsiveness of demand to changes in the income of the consumer."

⇒ The concept of income elasticity is used to measure the effect of changes in income of consumers on the demand for a commodity.

$$e = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in income}}$$

$$e_y = \frac{\Delta q}{q} \div \frac{\Delta y}{y}$$

$$= \frac{\Delta q}{q} \times \frac{y}{\Delta y}$$

change in quantity → Δq; quantity → q; y → income; Δy → change in income

Income elasticity of demand is:

(i) $e_y = 1$ ⇒ when the proportion of income spent on goods remains the same even after increase in income.

(ii) $e_y < 1$ ⇒ if proportion decreases

(iii) $e_y > 1$ ⇒ if proportion increases.

Cross Elasticity of Demand:

"The rate of responsiveness of quantity demanded of commodity A to changes in price of commodity B."

$$CE_{AB} = \frac{\text{\% change in quantity demanded of A}}{\text{\% change in price of B}}$$

$$CE_{AB} = \frac{\Delta Q_A}{Q_A} \div \frac{\Delta P_B}{P_B}$$

⇒ The cross price elasticity of demand for substitutes goods is greater than zero or positive.

⇒ complementory goods less than zero or negative.

⇒ Perfectly elasticity = 0

⇒ Perfectly elastic demand $e = \infty$.

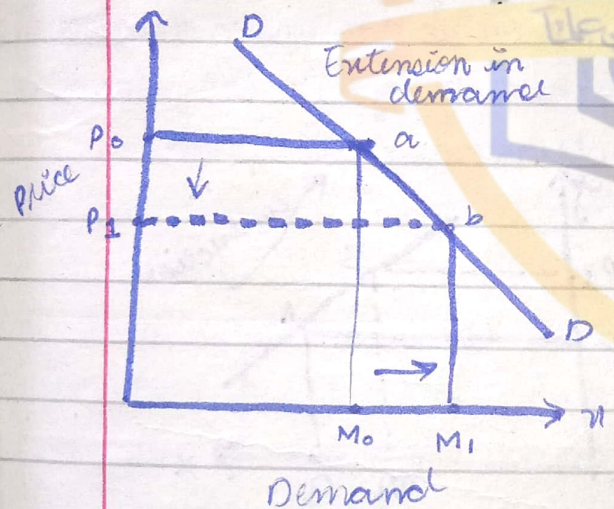
Differences:

Extension in demand

(i) Other things being constant, when with a fall in price, demand for a commodity rises, it is called extension in demand.

(ii) It is caused due to fall in price of a commodity.

(iii) There is downward movement along the same demand curve from left to right.

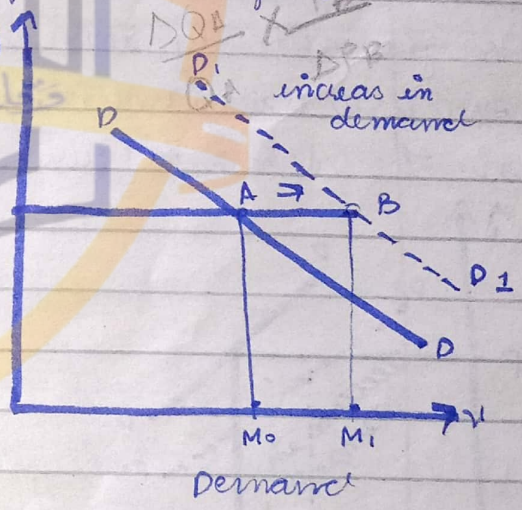


Rise Increase in Demand

(i) When at a given price larger quantity is purchased due to change in factors, other than price of same commodity, it is called increase in demand.

(ii) It is caused by change in other factors affecting demand price remaining the same.

(iii) Consumers demand curve shifts to the right.

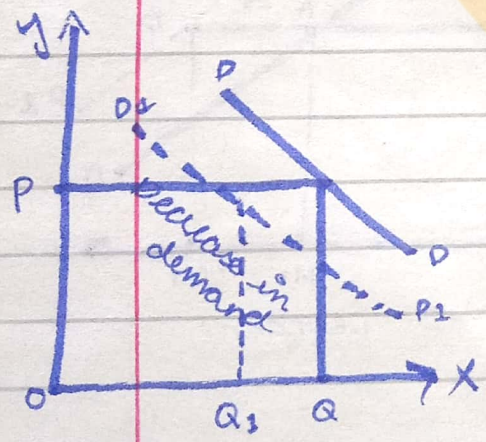


Decrease in Demand

⇒ This is caused by a change in determinants other than the own price of the commodity.

⇒ These include a decrease in income, a decrease in price of substitute goods, an increase in price of complementary goods, and a change in taste and ~~[illegible]~~ preferences against the commodity.

⇒ Diagrammatically, this is shown as a backward shift in the demand curve.

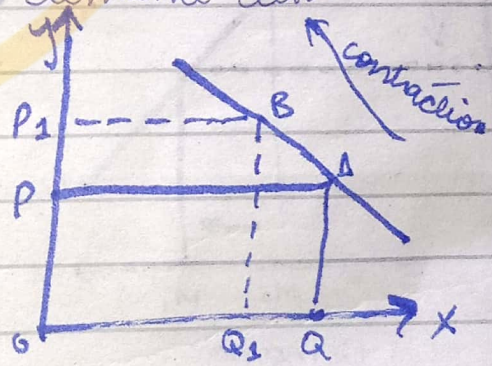


Contraction of demand

⇒ This is caused only by a change in own price of commodity

⇒ An increase in own price of commodity is the only cause

⇒ Diagrammatically, this is shown as an upward movement (right to left) on same demand curve



Basis for comparison	ELASTIC DEMAND	INELASTIC DEMAND
Meaning	When a little change in the price of a product results in a substantial change in the quantity demanded, it is known as elastic demand.	Inelastic demand refers to a change in price of a good result in no or slight change in the quantity demanded.
Elasticity quotient	More than equal to 1.	Less than 1
curve	Shallow	Steep
Price and Total revenue	Move in the opposite direction	Move in the same direction
Goods	Comfort and Luxury	Necessity

⇒ Increase in demand happens when more is purchased at same price and same quantity is purchased at a higher price. Decrease in demand happens when less is purchased at same price or same quantity at lower price.

"Various methods of measurement of elasticity of demand"

There are four methods of measuring elasticity of demand

1. Percentage method or Proportion method
2. Point method or Geometric method
3. Arc method
4. Expenditure method or Total Outlay

1. PERCENTAGE METHOD:

The price elasticity of demand is measured by its coefficient E_p. This coefficient E_p measures the percentage change in the quantity of a commodity demanded resulting from a given percentage change in its price.

Thus, $E_p = \frac{\%\text{ change in } q}{\%\text{ change in } p} = \frac{\Delta q/q}{\Delta p/p} = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$

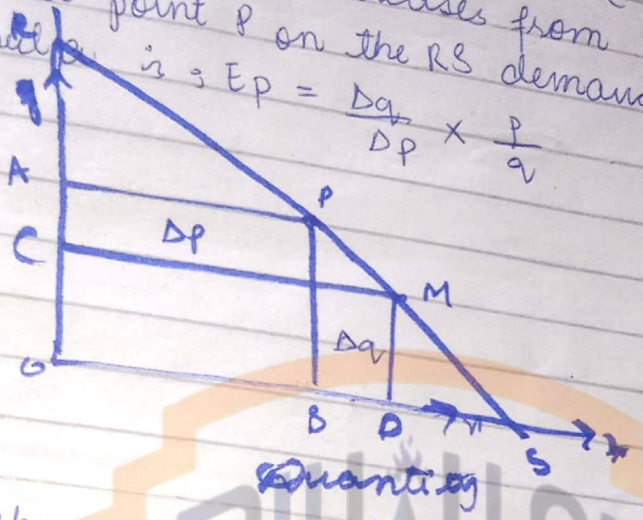
where q refers to quantity demanded, p to price and Δ to change. If $E_p > 1$, demand is elastic. If $E_p < 1$, demand is inelastic, if $E_p = 1$ demand is unitary elastic

⇒ With this formula, we can compute price elasticities of demand on basis of demand schedule.

2. POINT METHOD:

Geometrical method is used for measuring elasticity at a point on a demand curve. With the help of point method, it is easy to point out the elasticity at any point along a demand curve.

Let RS be a straight line demand curve if the price falls from PB (= OA) to MD (= OC). the quantity demanded increases from OB to OD. Elasticity at point P on the RS demand curve according to — Formula is; $E_p = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$



Where Δq represents change in quantity demanded, Δp changes in price level while p & q are initial price and quantity level

From Graph, $\Delta q = BD = QM$

$\Delta p = PQ$

$p = PB$

$q = OB$

Substituting these values in elasticity formula:

$$E_p = \frac{QM}{PQ} \times \frac{PB}{OB}$$

Moreover, $\frac{QM}{PQ} = \frac{BS}{PB}$ [$\angle PQM = \angle PBS$ being right angles & PQM & PBS are similar Δs]

$\therefore \frac{BS}{PB} \times \frac{PB}{OB} = \frac{BS}{DB}$

Since ΔPBS & $BROS$ are similar,

E_p at point P =

Demand → is effective desire to buy something

Demand = Desire + Purchasing power

Demand is an economic concept that relate to a consumer's desire to purchase goods and services and willingness to pay a specific price for them.

LAW OF DEMAND

"If other things donot change, people buy more of a good when its price falls and less of it when its price rises."

"Other things will remain same (no change in price related goods and income) ~~[illegible]~~e, if price of commodity are increase as a result their demand decreases & vice versa are called law of demand. This is also called first law of Purchase.

Price ↑ → Quantity demanded ↓

Price ↓ → Quantity demand ↑

Relationship

They have a inverse relationship b/w price & demand of the commodity

ASSUMPTIONS

(یہ وہ prove کرنے کے لیے جو Expectations لگائے جاتے ہیں means)

(یہ Assumptions ہوتے ہیں جو Expect کرتے ہیں future میں Prove)

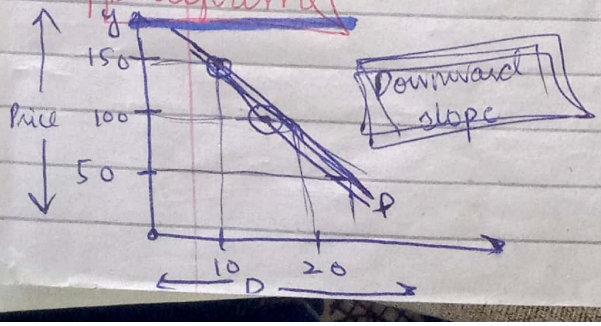
→ Other things will remain same. (No change in price of related goods, income, tasks, fashion, No exceptation of change in price, sizes of population will remain same)

Schedule

Price	Demand
↑ Rs 100	20 units
Rs 150	10 units ↓

(inverse in relationship)

Diagram



Key features

(1) Inverse Relationship

(2) Negative slop (\)

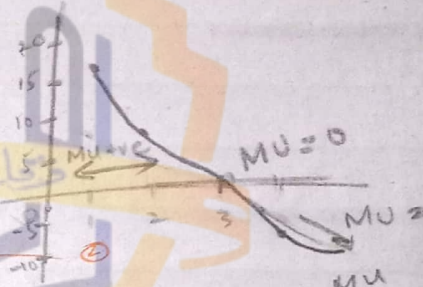
(3) Quantitative

→ Why Demand curve is Downward slopping?

1. Law of Diminishing Marginal Utility :-

(1) When a consumer will consume more and more units of commodity the utility derived from each successive units goes on decreases. So, consumer will not pay the full value on declining units as a result consumer will not respond to pay some prices for additional units of commodity. (2) Consumer will buy more units at declining the price of commodity.

Q	Price	MU
1	50/-	18
2	40/-	9
3	30/-	0
4	10/-	-8



2. Substitution effect :-

→ Substitution of one commodity in place of other when it becomes cheaper.

3. Income effect :

When real income of the consumer is changes due to change in the price of the commodity

⇒ how much money an individual makes after adjusting for inflation (کمائی) = wages - (wages x taxes) = remaining income we used for saving, consuming is real income

4. New Consumer:

When price of the commodity falls, many new consumer who was not in a position buy it earlier due to high price, New starts purchase it.

⇒ ↓price → ↑purchasess increase
⇒ ↑ price ⇒ ↓ purchase decrease
⇒ slope downward he ho ga-

5. Different Users:

Some commodity like milk, electricity etc, have several uses some of which are more important than the other. When a price of such a goods increases, it was get restricted to most important purpose for has important uses gets reduced.

➡ Diffuence b/w change in Demand and change in Quantity Demand:

	Change in Qty demand	Change in demand
1. Meaning	When the demand of product ... change ... Product ...	... matter price ... shift demand ... shift leftward ... rightward
	⇒ When the Q demanded chages due to change in price (other thing will remain same). It is known as Qty demanded.	→ When the demand due to change in any factor (price keep remain same) it is known as change in Demand.

② Effect on demand curve	It leads to a movement along the demand curve • Downward • Upward	It leads to a shifting along the demand curve • Rightward • Leftward-
③ changes	It impact on demand by ✓ Expansion in demand ✓ Contraction in demand-	It impact on demand by ✓ Increase in demand ✓ Decrease in demand-
④ Assumption	Other factor keep remain constants.	Price keeps remain constants.
⑤ Major components	Price of commodity (depends)	Other factors (depends)

FACTORS AFFECTING OF DEMAND

- Price
  - Due to other factors

] ⇒ اگر ایک constant ہو گا تو وہ دوسرے پر depend کرے گا

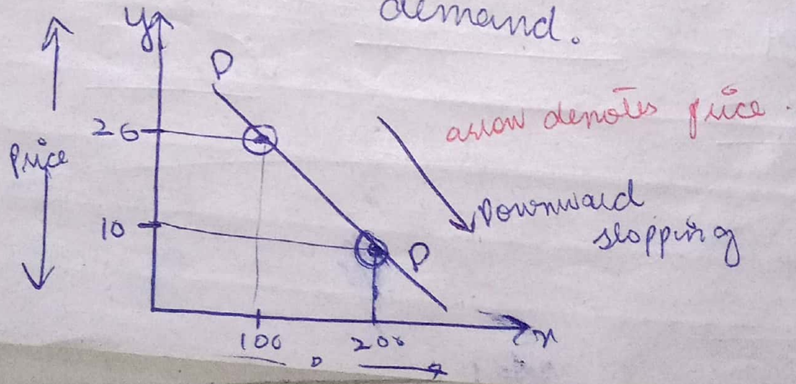
1- PRICE

Movement on demand curve → P↓ → Q↑

Expansion in demand

Price	Demand
↓ 20	100 ↑
10	200

→ When other factor will remain constant, when price of a commodity are decrease as a result the Q.demand are rise are called expansion in demand.

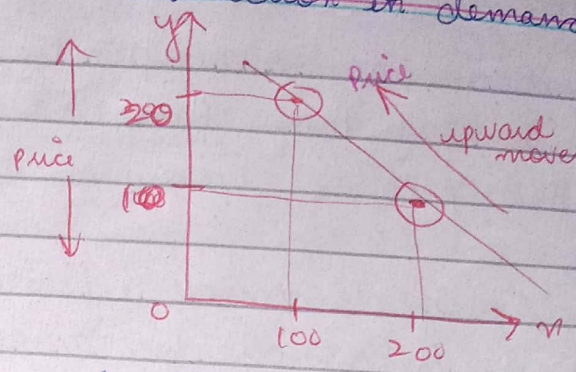


Contraction in demand

Price	demand
↑ 10	200
↑ 20	100 ↓

P ↑ → Q ↓

→ When other factors will remain constant, if price of a goods are increases as a result demand are decline are called contraction in demand.

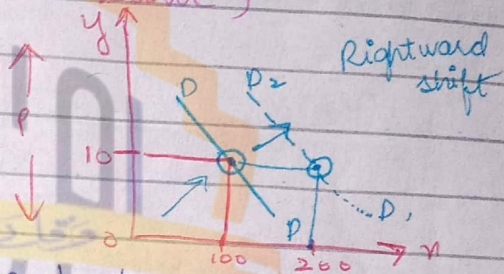


2. Due To other factors :

(Shifting along demand curve)

1. Increase in demand :

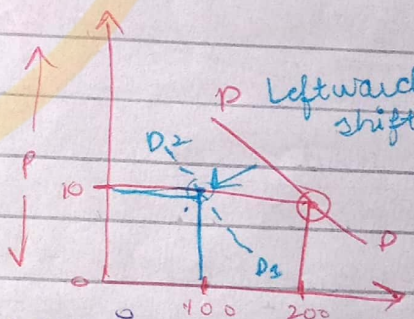
Price	Demand
10	100 ↑
=10	200



→ When the price of a good are constant, due to other change in other factors demand is rises such rise in demand is called increase in demand.

2. Decrease in demand

Price	Demand
10	200 ↓
=10	100



→ When the price of a goods are remain constant, due to change in other factors, demand are decreases such decline is called decrease in demand.

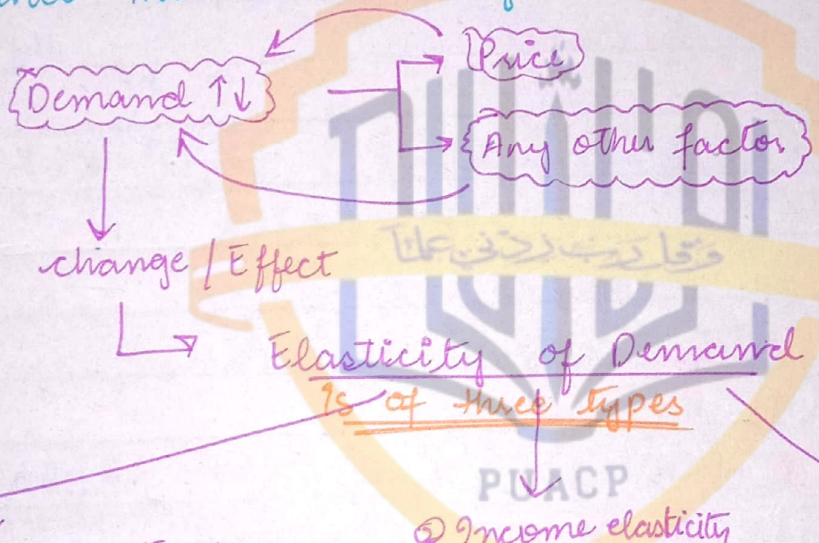
Elasticity of demand

⇒ demand me kisi bhi kisim ka change i.e., increase or decrease is elasticity of demand.

def : The concept of elasticity of demand is developed by Prof. Alfread Marshall in his book "Principles of Economics"

Meanings:

Elasticity of demand refers to the percentage change in demand for a commodity with respect to percentage change in any of the factor affecting demand that commodity.



① Price elasticity of demand

Price میں تبدیلی آنے کی وجہ سے demand میں تبدیلی آتی ہے اسے Price elasticity of demand کہتے ہیں

(Price ⇒ Demand)

$= \frac{\%\text{ change in } Q_d}{\%\text{ change in price}} = \frac{\%\ \Delta Q}{\%\ \Delta P}$

② Income elasticity of demand

Income میں تبدیلی آنے کی وجہ سے demand میں تبدیلی آتی ہے Income elasticity of demand کہلاتی ہے

(Income ⇒ Demand)

$= \frac{\%\text{ change in } q_x}{\%\text{ change in income}}$

$e_y = \frac{\Delta q_x}{q_x} \times \frac{y}{\Delta y}$

③ Cross elasticity of demand

Substitutes ya complementary goods is wajah se jo demand mein change aye wo cross-elasticity of demand kehlata hai.

(substitutes/complementary goods ⇒ Demand)

$= \frac{\%\text{ change in quantity demanded of A}}{\%\text{ change in price of B}}$

→ Methods of Price Elasticity of demand are as follows

1. Percentage Method or Proportionate method
2. Total Expenditure method or Total outlay method
3. Geometric Method or Point Method
4. Arc Method
5. Revenue Method

2.| Percentage Method

According to this method, elasticity is measured as the ratio of percentage change in Q.d to % change in price.

$$Ed = \frac{\%\ \text{change in Q.demanded}}{\%\ \text{change in price}}$$

SUPPLY (As a Sh)

→ If we have let suppose 8 pens hain so this is STOCKS me in 8 me sy 4 pens ko sale karna chahti hun during a given period of time wo SUPPLY hain

Jo cheeze akhti hun gi means jo hum sell karna bhi chahty aur nahe bhi wo STOCKS ho gi

def "Supply refers to quantity of a commodity that a firm is willing and able to offer for sale at a given price during a given period of time."

(1) Supply

Supply is of two types

- Individual supply
- Market supply

Dif b/w supply and stock

Meaning

→ Stock refers to total quantity of a particular ~~quantity~~ commodity that is availiable with the firm at a particular point of time.

Example

If a seller has 50 tones sugar in his warehouse and he is willing to sell 30 Tones @ 37/kg, then supply is 30 tones & stock is 50 tones.

2 Types of supply

1. INDIVIDUAL SUPPLY:

It refers to quantity of a commodity that ~~also~~ individual firm is willing and able to offer for sale at a given price during a given period of time.

2. MARKET SUPPLY

It refers to quantity of commodity that all the factors are willing and able to offers for sale, at a price during a given period of time.

LAW OF SUPPLY

→ Meaning:-

Law of supply states that, keeping other factors constants if price of a commodity are increases as a result supply are also increas and vice versa.

→ Relationship:- → ↑price → ↑demand, ~~↓price~~ → ~~↓demand~~

They have a direct relationship b/w price & supply of a commodity

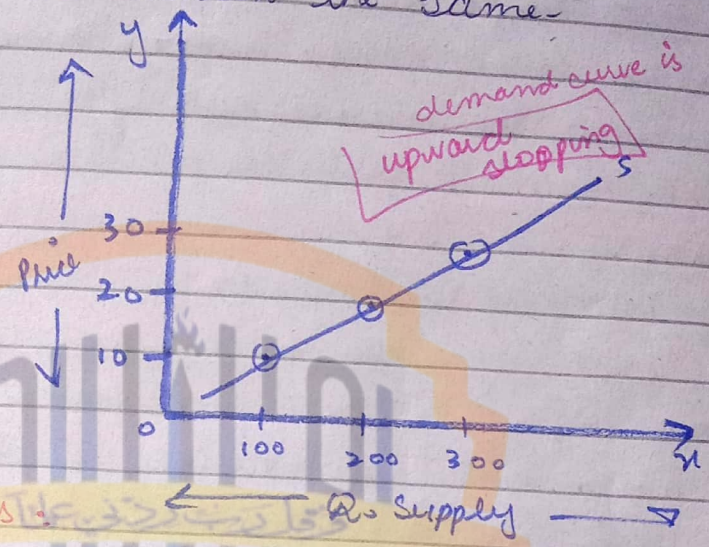
⇒ Assumptions:- ⇒ are the future expectation without any proof

These are the following other factors keep constant.

(1) Price of other goods is constant
(2) There is no change in the state of technology
(3) Price of factors of productions remains the same.
(4) There is no change in taxation policy
(5) Goal of Produces remain the same.

⇒ Schedule:

Price	Supply
10	100
20	200
30	300



⇒ Facts / Keypoints:

1. Positive relationship b/w Price & Q. supplied
2. Qualitative Statements
3. It doesnot establish any proportional relationship b/w change in price and change in Q. demand.
4. Based on one sided concept.

Reasons Of Law Of Supply:

1. Profit Motive:

The basic aim of produces, while applying a commodity is to secure maximum profit, when price of a commodity increases, without any change in

costs it raises their profit so producer increase the supply of the commodity by increasing the production on the other hands with fall in prices. Supply also decrease as profit margin decreases at low price

2. change in No. of firm :-

A rise in price induces the prospective producer to enter into the market to produce the given commodity so as to earn higher profit. Increase in no. of firms raise the market supply.

3. change in stock :

When the price of good increase, the seller are ready to supply more goods from their stock. However, at a relatively lower price, the production release big quantities from their stock. They starts increasing their inventaries with a view that price may rise in near future

Affecting factors of Supply

2 factors

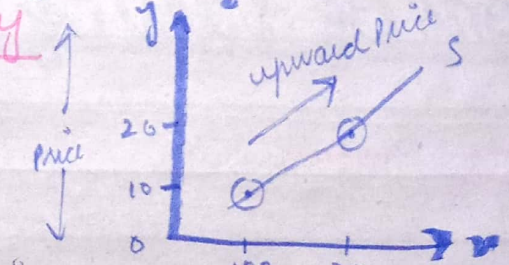
- Price of own goods (change in quantity supply)
- Due to other factors. (This is called change in supply.)

1. Price of own goods

(Movement along supply curve.

- Expansion in Supply

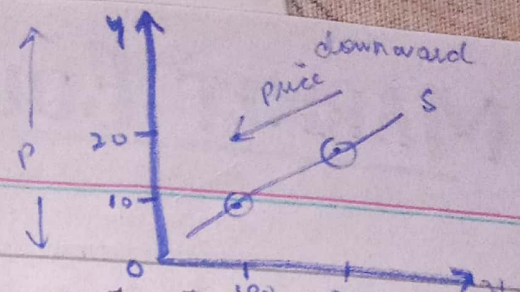
Price	Supply
10	100
20	200



⇒ When other factors will remains constant, if price of a commodity are increase as due to supply rises

→ Contraction in Supply

Price	Supply
20 ↓	200
10	100 ↓



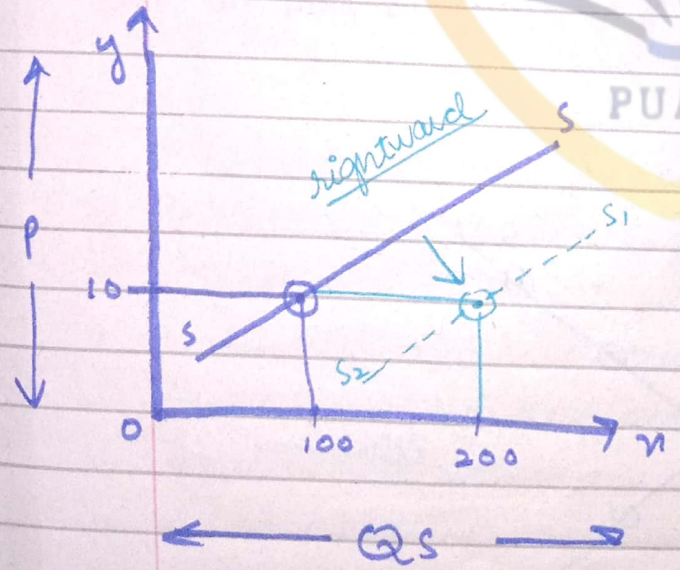
→ When other factor remains constant if price of a commodity are decrease due to supply falls.

2. Due to other factors:
(shifting along supply curve)

→ Increase in supply

Price	Supply
10	200 ↑
= 10	200

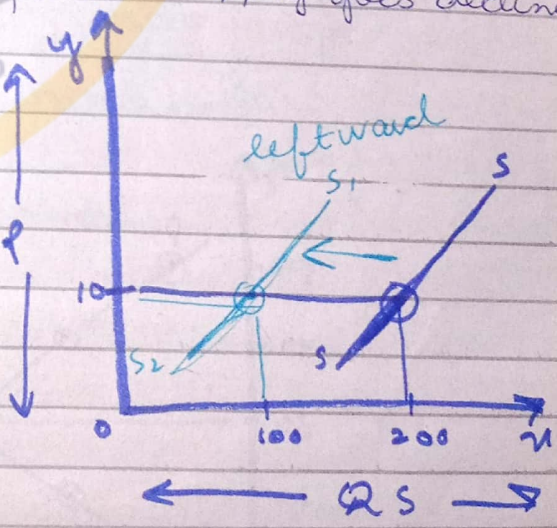
→ When price of a commodity will remain constant, due to change in other factors supply are rises.



→ Decrease in supply

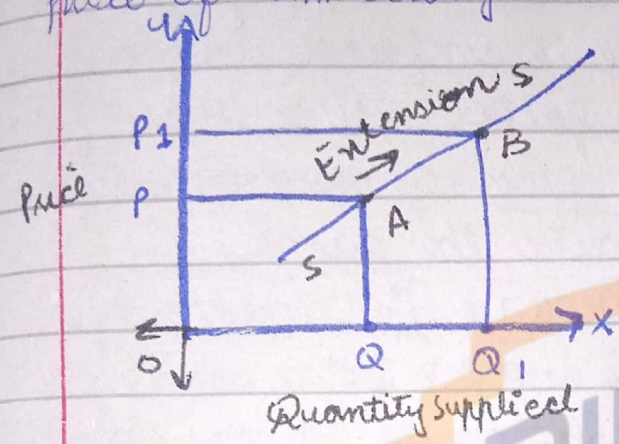
Price	Supply
10	200
= 10	100 ↓

→ When price of a commodity will remain constant due to change in a factor supply goes decline



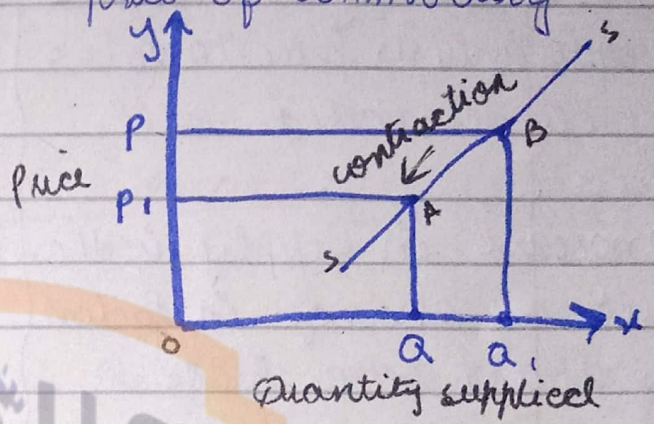
SUPPLY

• **Extension of supply:** When a supply of commodity rises only due to increase in price of commodity.



• Extension of supply is result of change in price of own commodity. Factors other than price of own commodity remains constant. It cause upward movement along same supply curve.

• **Contraction of supply** When supply of commodity falls only due to fall in price of commodity



• "Contraction in supply" means falls in quantity supplied due to fall in price of good only other factor remaining unchanged.
• It is shown by downward movement on same supply curve.

Rise of supply

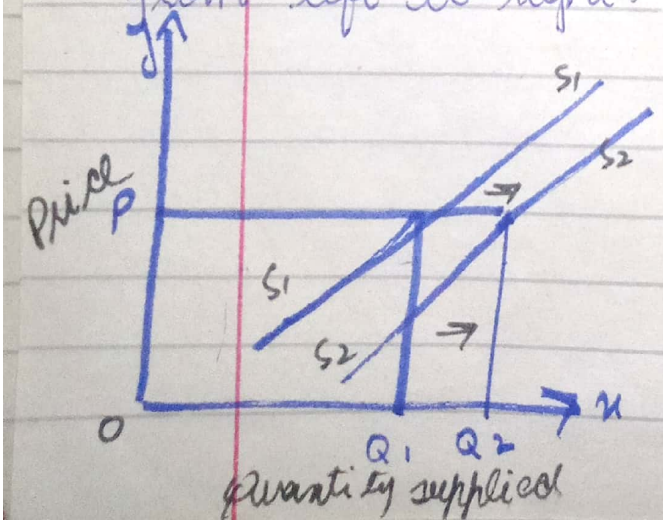
Increase in price results in a rise in supply & fall in demand. A increase in supply, all other things unchanged, will cause the equilibrium price to fall; quantity demanded will increase.

⇒ Increase in supply is the result of change in factors other than own price.

⇒ Increase in supply means more quantity supplied at given price.

⇒ Increase in supply takes place due to favourable change in factors other than price. The price of commodity remain the same.

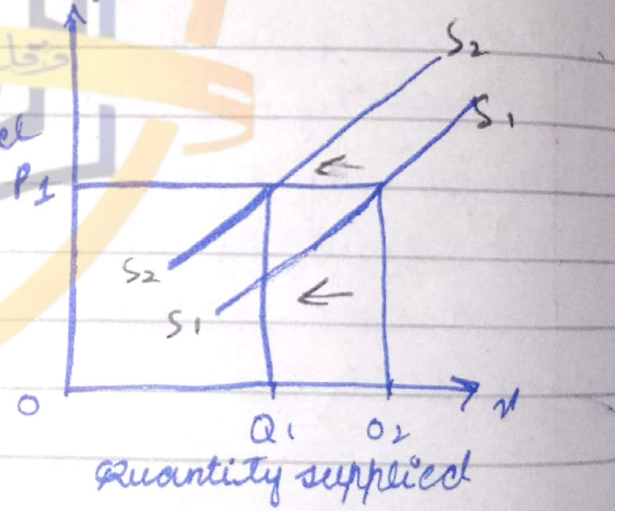
⇒ Increase in supply is shown by a shift in supply curve from left to right.



Fall in supply

- When less quantity is supplied at same price, it is called as decrease in supply
- Decrease in supply takes place due to unfavourable change in factors other than price. The price of commodity remains the same.

⇒ Decrease in supply curve is shown by a shift in supply curve from right to left.



"Elasticity of Supply"

Price elasticity of supply a measure of how much the quantity supplied of a good responds to a change in price of that good, computed as the percentage change in quantity supplied divided by percentage change in price.

$$\text{Price elasticity of supply} = \frac{\%\text{ change in quantity supplied}}{\%\text{ change in price}}$$

Example

Suppose that an increase in the price of milk from $2.85 to $3.15 a gallon rises the amount that dairy farmers produce from 9,000 to 11,000 gallons per month. Using the midpoint method, we calculate the percentage change in price as.

Percentage change in price = $(3.15 - 2.85)/3.00 \times 100 = 10$ percent

Similarly, we calculate the percentage change in quantity supplied as

Percentage change in quantity supplied $= (11{,}000 - 9{,}000)/10{,}000 \times 100$

$= 20$ percent.

In this case, price elastic of supply is

$$\text{Price elasticity of supply} = \frac{20 \text{ percent}}{10 \text{ percent}} = 2.$$