

10 principles of economics.

- » 1. People face trade-offs: To get something, you usually have to give up something else.
- 2. Opportunity Cost: The real cost of a decision is the next best alternative.
- 3. Thinking at the Margin: Decisions are made based on small changes in benefits and costs.
- 4. Incentives Matter: People respond to changes in costs and benefits.
- 5. Trade benefits: Trade allows for specialization and mutual benefit.
- 6. Markets organize efficiently: Free markets generally allocate resources well.
- 7. Government intervention: Govt. can improve outcomes when markets fail.
- 8. Productivity drives Living Standards: Higher productivity means better living standards.
- 9. Inflation and money supply: Excess money printing causes inflation.
- 10. Inflation vs unemployment: There is a short-time trade-off between them.

■ Definition of Economics.

■ Micro and Macro Economics.

Economics: Economics is the social science subject where it discusses how do we fulfill our unlimited wants by facing limited resources also discuss about what to produce, whom to produce and what to distribute in society.

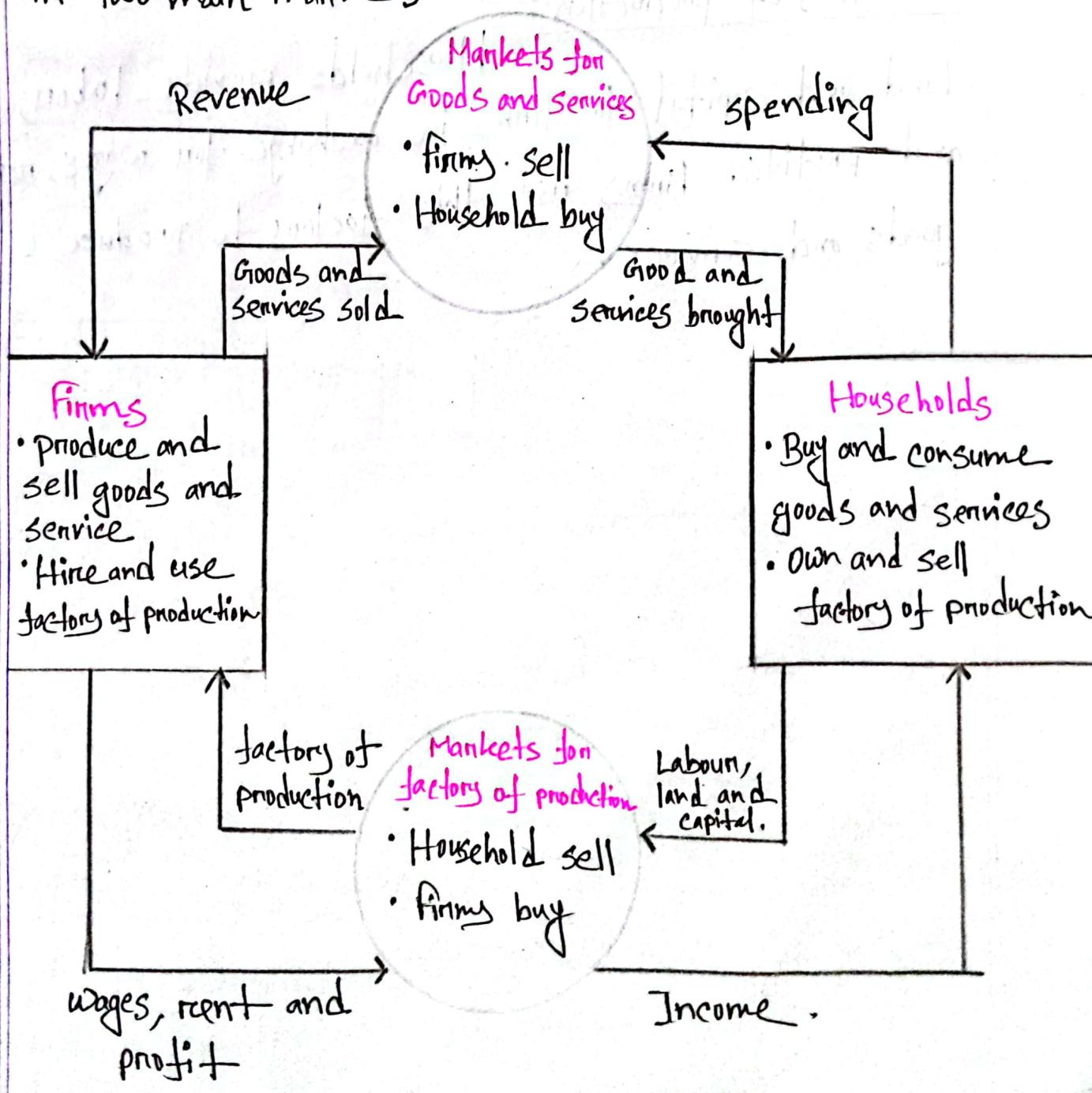
Micro economics	Macro economics
1. It is the branch of economics that is related to the study of individual firms and households behaviour in decision making.	1. It is the branch of economics that is related to the study of the behaviour and performance of the economy in total.
2. It studies the particular market segment of economy.	2. It studies the whole economy that covers several market segments.
3. It deals with various issues like demand, supply, factor pricing... etc.	3. It deals with various issues like GDP, employment, distribution.. etc.
4. It is applied to internal issues.	4. It is applied to external issues.

□ Nonnormative and positive statements.

positive	Nonnormative
1. Describes and explains how things are based on facts and data.	1. Focuses on how things should be based on beliefs and opinions.
2. It is objective, fact based.	2. It is subjective, value based.
3. It can be tested or verified through observation and evidence.	3. It can not be proven right or wrong as it depends on personal or social beliefs.
4. These are important as it helps to understand how the economy works.	4. These are important as it helps to shape the economic policies.
5. Example: "Raising the minimum wage will increase labour cost."	5. Example: "The minimum wage should be raised to improve workers living standard".

■ Circular flow diagram.

→ The circular flow diagram is a visual model that illustrates the flow of goods, services and money in an economy. It shows how households and firms interact in two main markets.



1. Goods and services market:

Households buy goods and services from firms, spending money. Firms sell this goods and services, receiving revenue.

2. Factory of production:

Households provide labor, land and capital to firms in exchange for wages, rent and profits. Firms use these factors to produce goods and services.

■ Law of demand / Law of supply, Hypothetical schedual graph.

→ Law of Demand: As the price of a good or service decreases, the quantity demanded increases, and as the price increases, the quantity demanded decreases, all else being equal. This reflects the inverse relationship between price and demand.

Law of supply: As the price of a good or service increases, the quantity supplied increases, and as the price decreases, the quantity supplied decreases, all else being equal. This shows a direct relationship between price and supply.

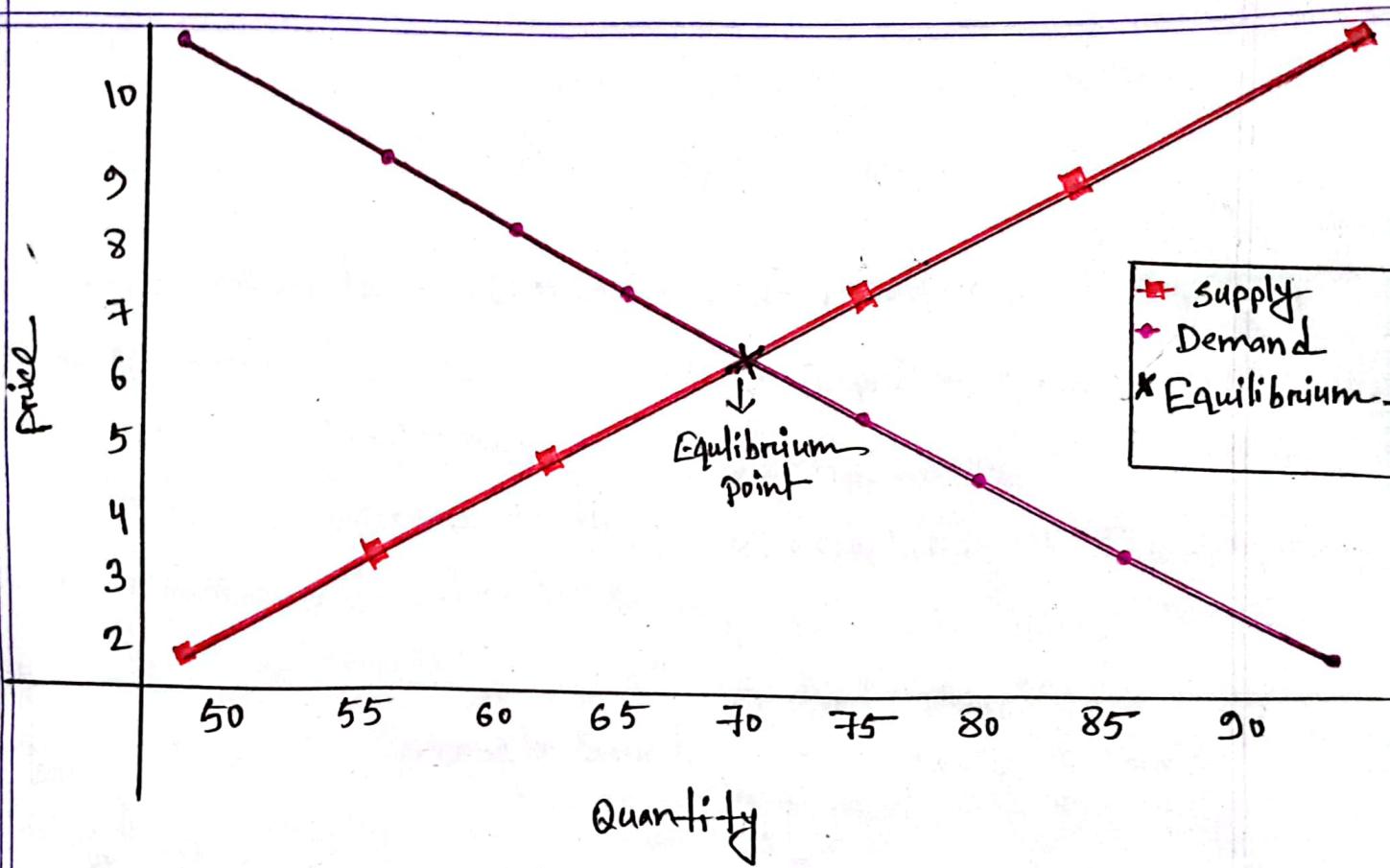
* A hypothetical graph can be used to illustrate the Law of Demand and Law of Supply.

Demand Schedule ↓

price	Quantity Demand
\$ 10	50
\$ 8	60
\$ 6	70
\$ 4	80
\$ 2	90

Supply Schedule ↑

price	Quantity Supplied
10	50
8	60
6	70
4	80
2	90



Hypothetical Demand and Supply Graph

In the graph:

Graph.

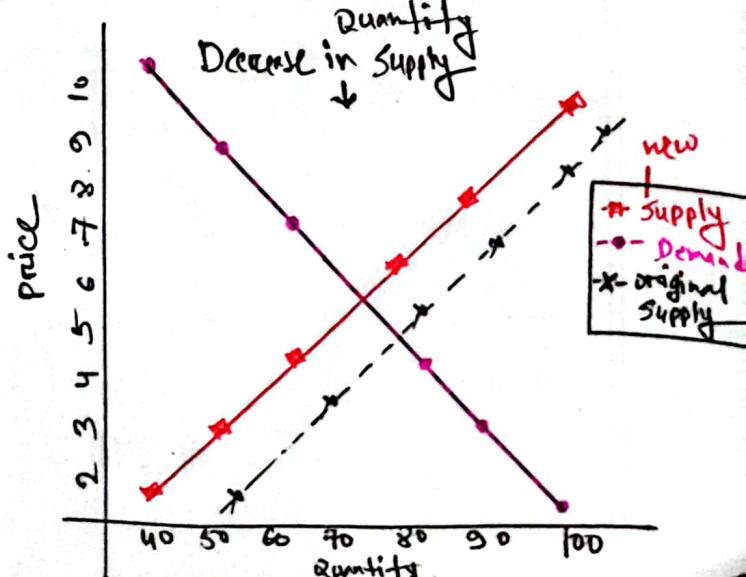
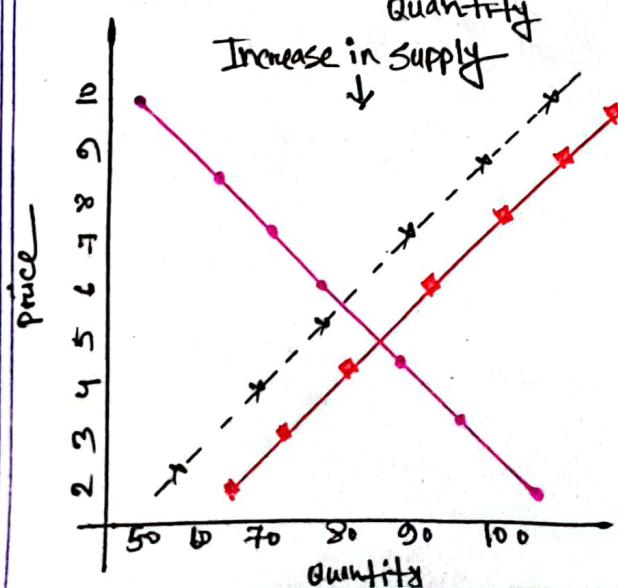
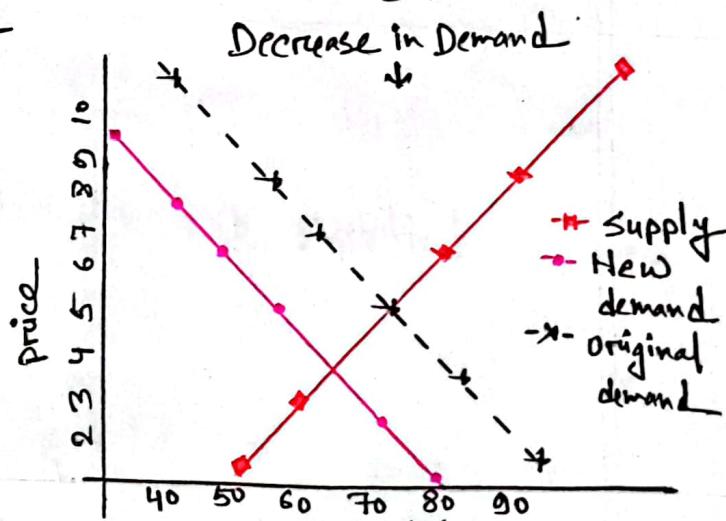
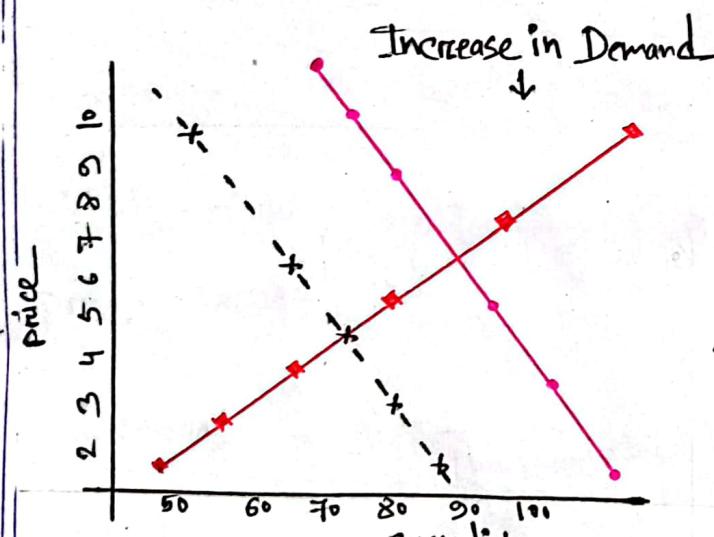
- X-axis represents the quantity
- Y-axis represents the price
- The Demand curve slopes downward, showing that lower prices lead to higher demand
- The Supply curve slopes upward, indicating that higher prices lead to higher supply.
- The Equilibrium point, where quantity demanded equals quantity supplied.

□ Determinants of demand / supply will be given,
draw a graph according to the changes.

→ Determinants of Demand: Determinants of Supply:

1. consumer income
2. Consumer Preferences
3. Prices of Related Goods
4. Expectations of future price
5. Harm of Buyers

1. Input price
2. Technology
3. Expectations of future price
4. Hum of sellers
5. Govt. policies.



1. Increase in Demand (Top left):

The demand curve shifts right, showing higher quantity demanded at each price level.

2. Decrease in Demand (Top Right): The demand curve

shifts left, indicating lower quantity demanded at each price level.

3. Increase in Supply (Bottom left): The supply curve

shifts right, reflecting higher quantity supplied at each price level.

4. Decrease in Supply (Bottom right): The supply curve

shifts left, showing lower quantity supplied at each price level.

□ Elasticity

Elasticity in economics measures how much the quantity demanded or supplied of a good responds to changes in price, income or other factors. It helps analyze how sensitive consumers and producers are to changes in the market.

Types of Elasticity:

1. Price Elasticity of Demand (PED):

- Measures the responsiveness of quantity demanded to changes in the price of a good.
- Formula. $PED = \frac{\% \text{ change in Quantity Demand}}{\% \text{ change in price}}$
$$PED = \frac{(Q_2 - Q_1) / [(Q_2 + Q_1)/2]}{(P_2 - P_1) / [(P_2 + P_1)/2]}$$
- If $PED > 1$, demand is elastic.
- If $PED < 1$, demand is inelastic.

PED example:

If the price of an ice cream cone increases from \$2.00 to \$2.20 and the amount you buy falls from 10 to 8 cones, then your ED, using the midpoint formula, would be:

$$\text{PED} = \frac{\frac{(8 - 10)}{(10 + 8)/2}}{\frac{(.22 - .20)}{(2.00 + 2.20)/2}} = \frac{-22\%}{0.5\%} = -2.32$$

The variety of Demand curve:

- Inelastic Demand

- Quantity demanded doesn't respond strongly to price changes

- Price elasticity of demand is less than 1.

- Elastic Demand

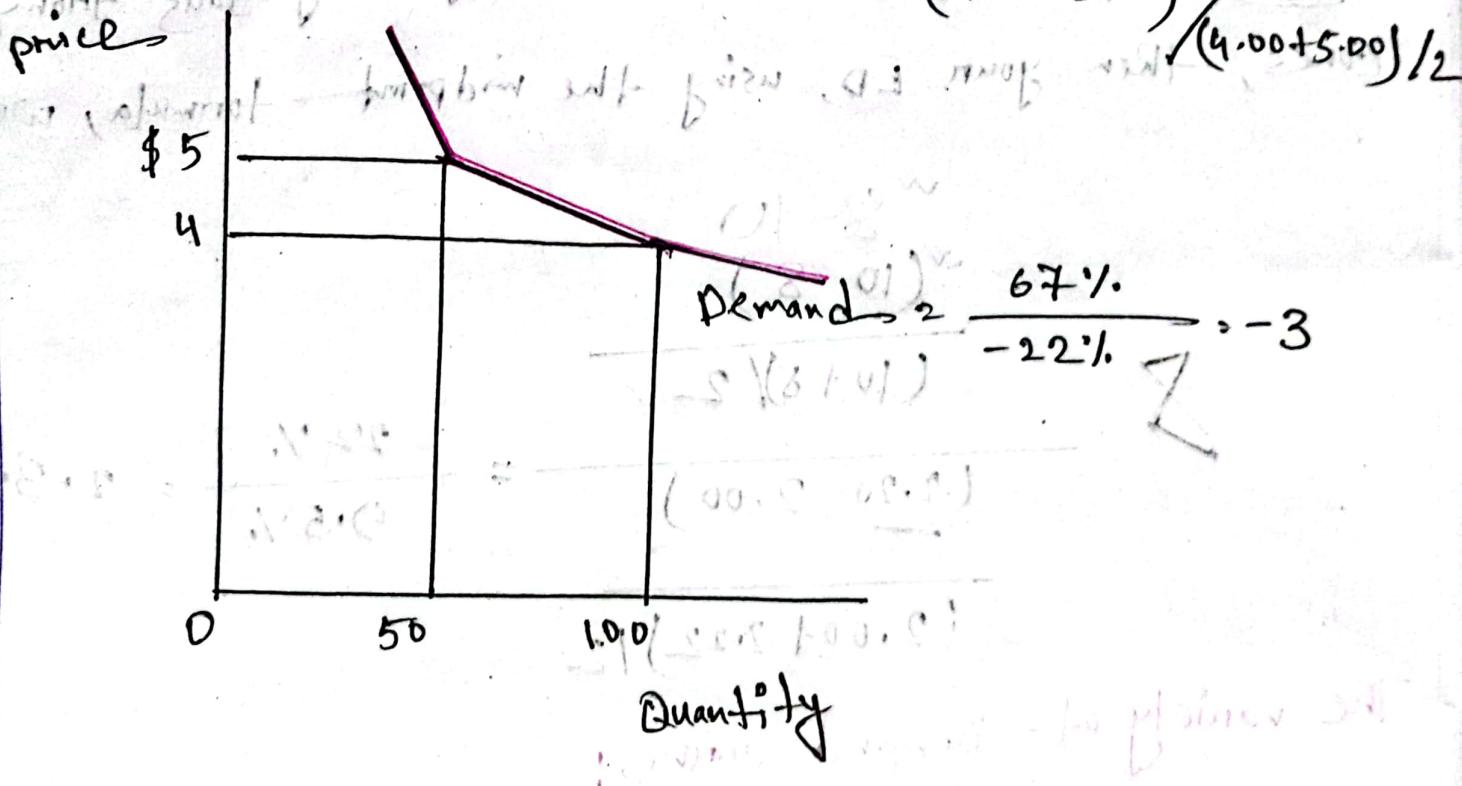
- Quantity demanded responds strongly to price changes.

- Price elasticity of demand is greater than 1.

Computing the PED↓

$$\frac{(100-50)}{(100+50)/2}$$

$$ED_2 = \frac{(4.00-5.00)}{(4.00+5.00)/2}$$



$$\frac{67\%}{-22\%} = -3$$

inelastic demand

expansion of output causes total cost to fall

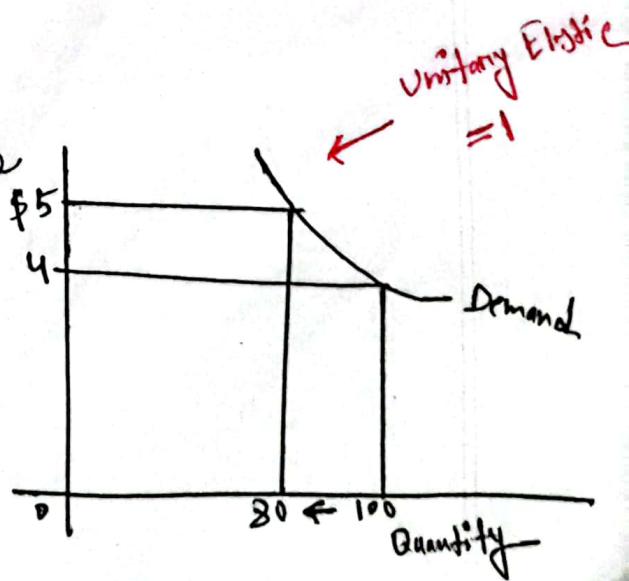
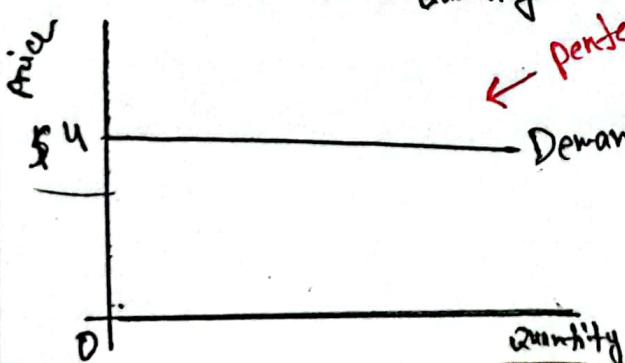
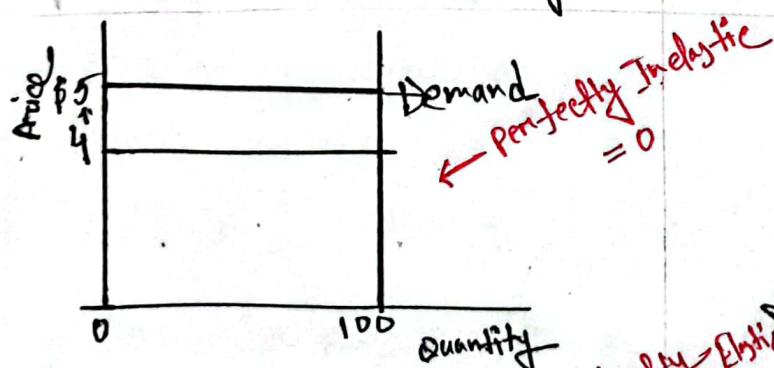
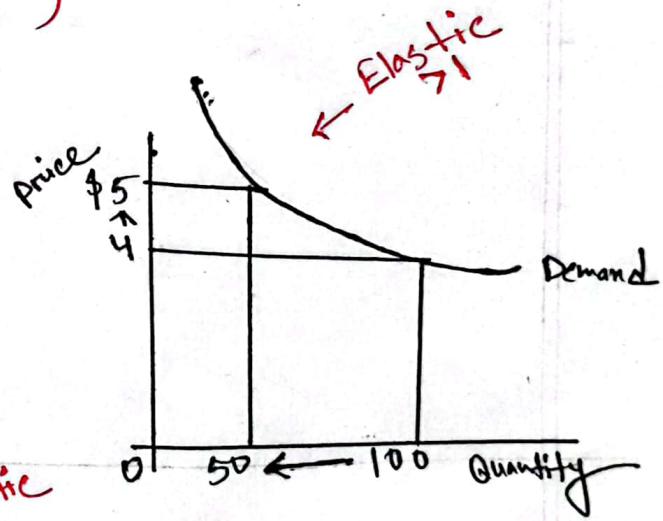
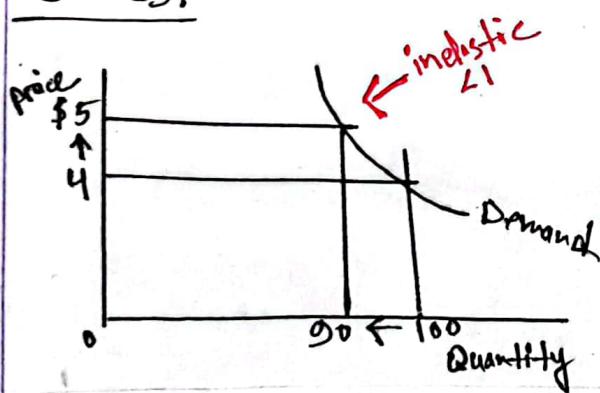
a. fall cost of labor to profit point

b. no effect

The Variety of Demand Curve:

1. Inelastic ($PED < 1$)
2. Elastic ($PED > 1$)
3. Perfectly Inelastic ($PED = 0$)
4. Perfectly Elastic ($PED = \infty$)
5. Unitary Elastic ($PED = 1$)

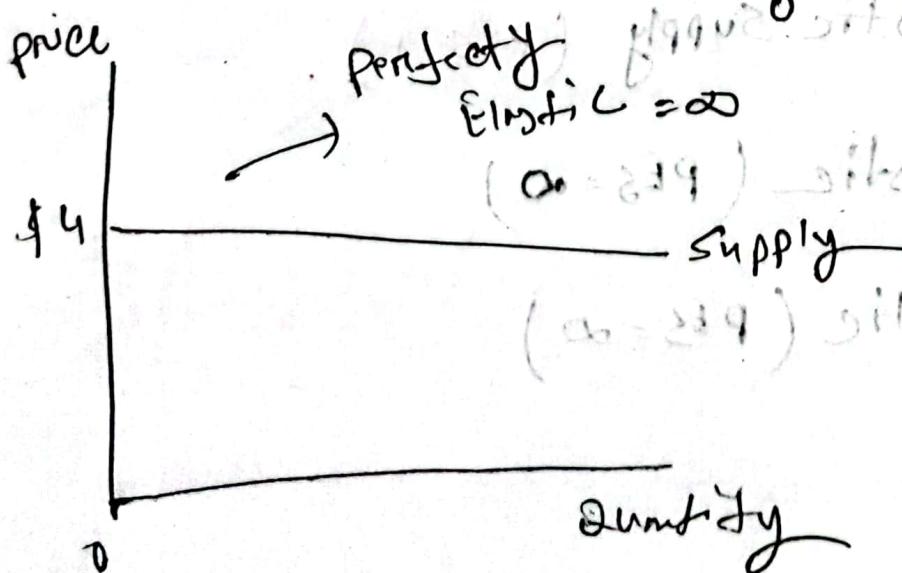
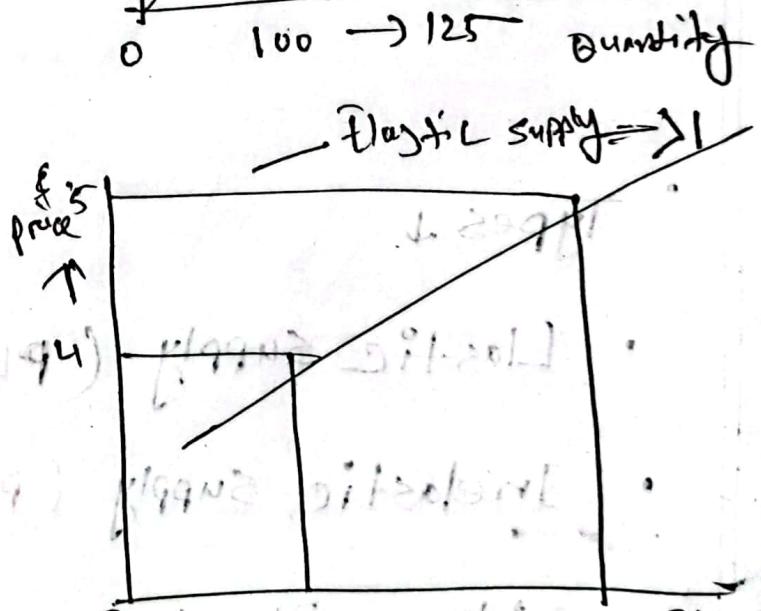
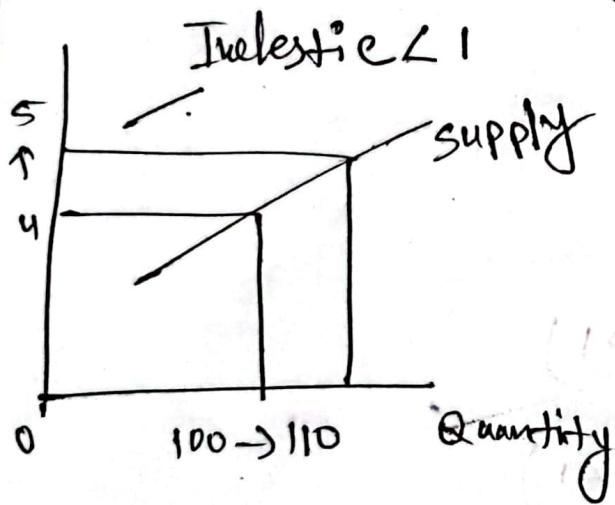
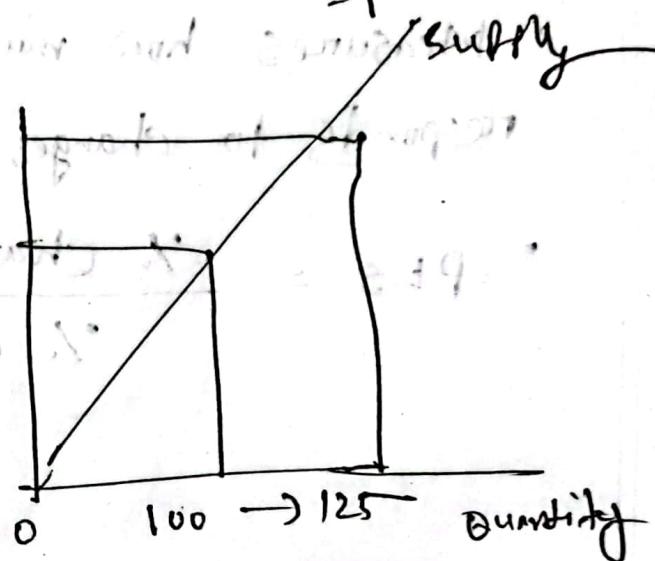
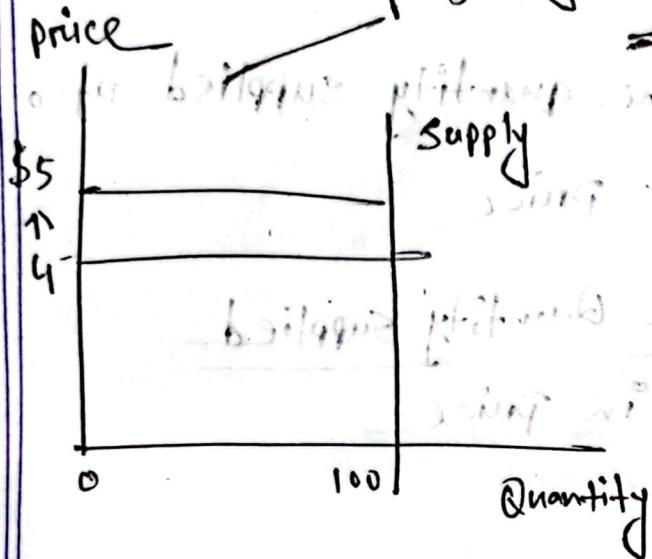
Curves:



2. Price Elasticity of Supply:

- Measures how much the quantity supplied of a good responds to changes in its price
- $PES = \frac{\% \text{ Change in Quantity Supplied}}{\% \text{ Change in Price}}$
- Types ↴
 - Elastic Supply ($PES > 1$)
 - Inelastic Supply ($PES < 1$)
 - Unitary Elastic Supply ($PES = 1$)
 - Perfectly Inelastic ($PES = 0$)
 - Perfectly Elastic ($PES = \infty$)

Curves:



3. Income Elasticity of DEMAND (YED):

$$\bullet \text{ YED} = \frac{\% \text{ Change in Quantity Demand}}{\% \text{ Change in income}}$$

• Types ↓

• positive YED (> 0)

• Negative YED (< 0) .

4. Cross-price Elasticity of Demand (XED):

$$\bullet \text{ XED} = \frac{\% \text{ Change in Quantity of Good A}}{\% \text{ Change in price of Good B}}$$

Types ↓

• positive XED (> 0)

• Negative XED (< 0)

• Zero XED: The goods are unrelated.

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Assignment

a) We know,

$Q_s = \text{Supply function}$

$Q_d = \text{Demand function}$

P. Price

Given that, $Q_s = -20 + 3P$

$$Q_d = 220 - 5P$$

At equilibrium point,

$$Q_s = Q_d$$

$$\Rightarrow -20 + 3P = 220 - 5P$$

$$\Rightarrow 3P + 5P = 220 + 20$$

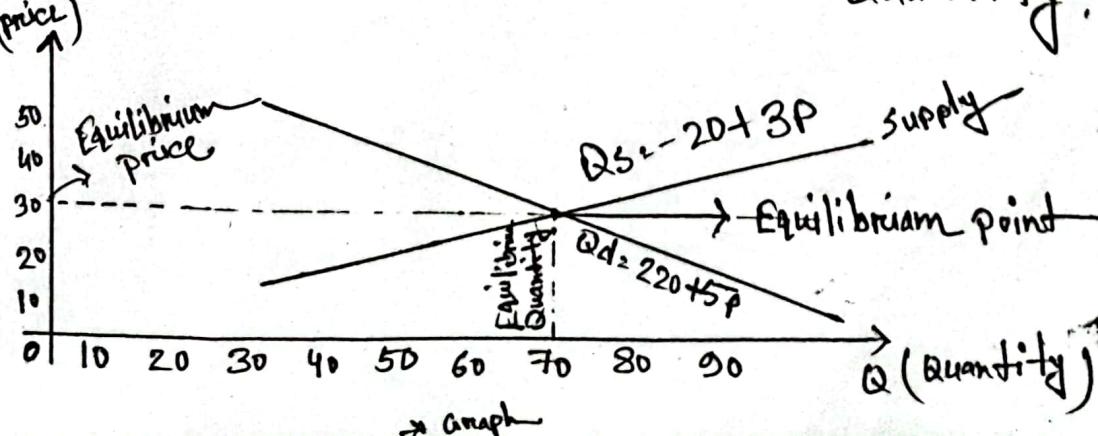
$$\Rightarrow 8P = 240$$

$$\Rightarrow P = 30 \quad [\text{Equilibrium price}]$$

$$Q_s = -20 + 3P = -20 + 90 = 70$$

$$Q_d = 220 - 5P = 220 - 150 = 70$$

] Equilibrium Quantity.



b) Given that,

$$Q_S = -45 + 8P$$

$$Q_D = 125 - 2P$$

At equilibrium point,

$$Q_S = Q_D$$

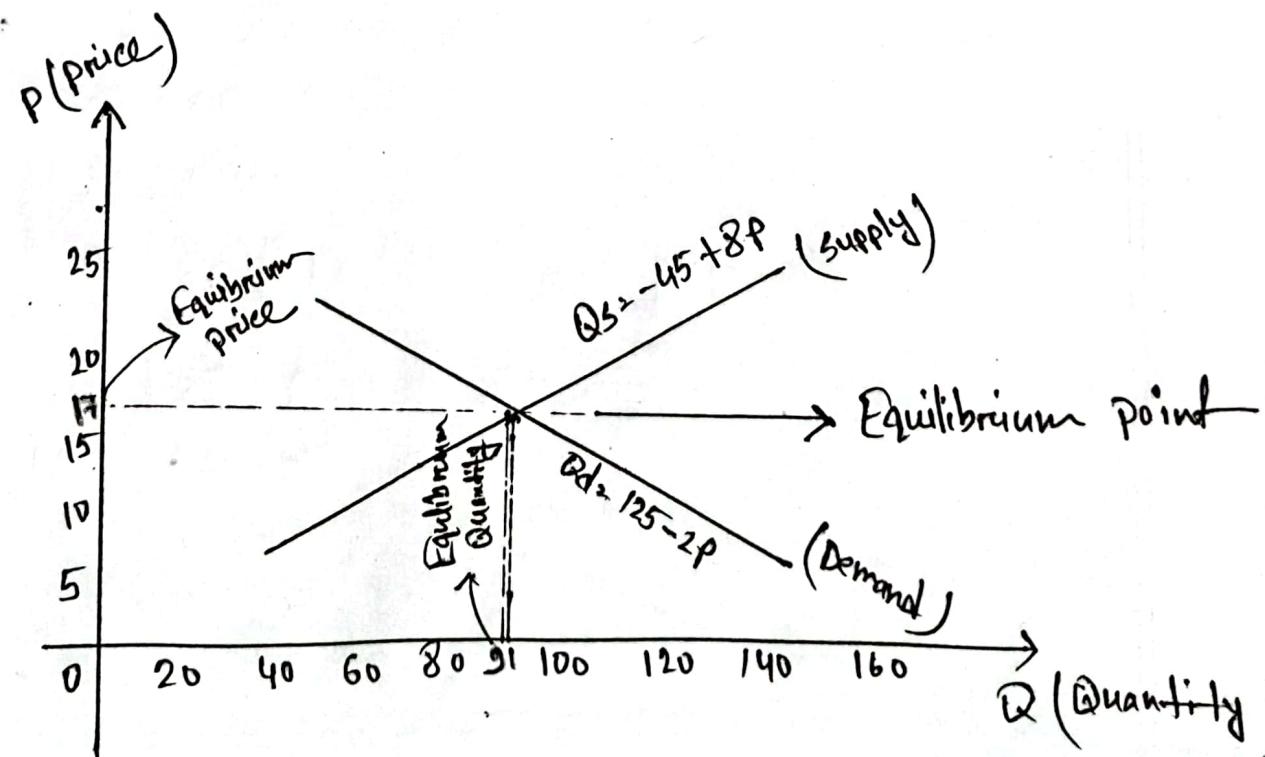
$$\Rightarrow -45 + 8P = 125 - 2P$$

$$\Rightarrow 8P + 2P = 125 + 45$$

$$\Rightarrow 10P = 170 \therefore P = 17 \text{ [Equilibrium price]}$$

Now,

$$Q_S = -45 + 8P = -45 + 8 \times 17 = 91 \rightarrow \text{Equilibrium Quantity}$$



* Graph

c) Given that,

$$Q_s = -32 + 7P$$

$$Q_d = 12P - 9P$$

At equilibrium point,

$$Q_s = Q_d$$

$$\Rightarrow -32 + 7P = 12P - 9P$$

$$\Rightarrow 16P = 160$$

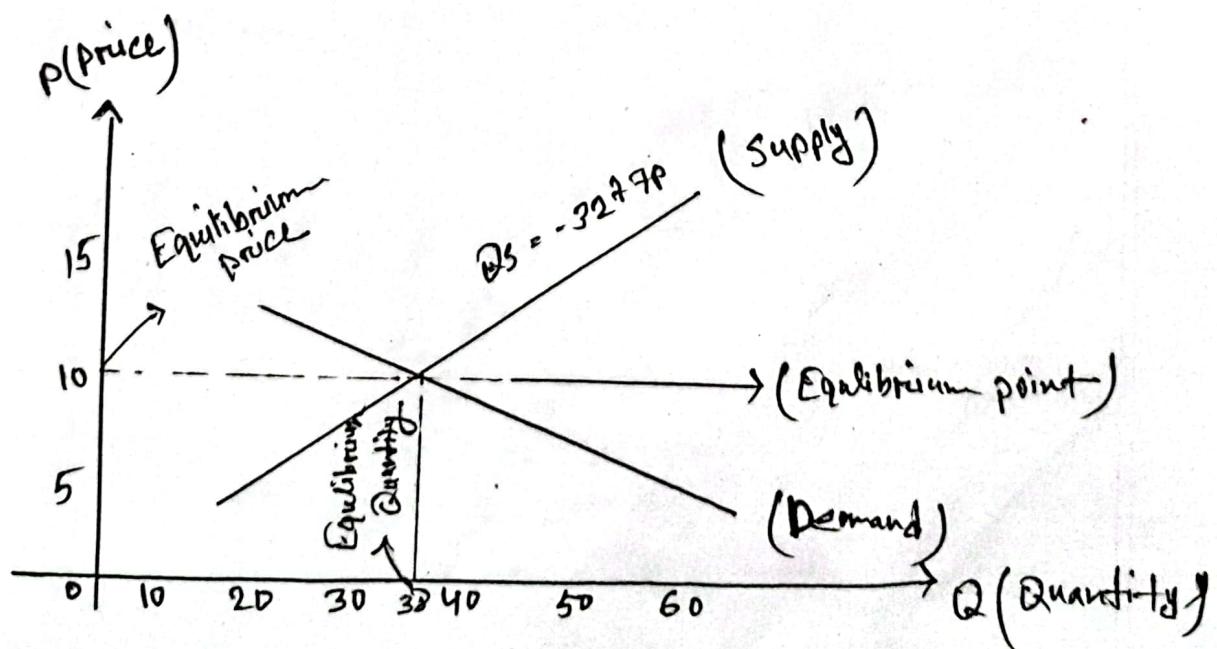
$$\Rightarrow P = 10 \text{ [Equilibrium price]}$$

Now,

$$Q_s = -32 + 7P = -32 + 70 = 38$$

$$Q_d = 12P - 9P = 128 - 90 = 38$$

] Equilibrium Quantity



graph

a) Given that,

$$Q_S = 13P - 27$$

$$Q_D = -4P + 24$$

At equilibrium point,

$$Q_S = Q_D$$

$$\Rightarrow 13P - 27 = -4P + 24$$

$$\Rightarrow 13P + 4P = 24 + 27$$

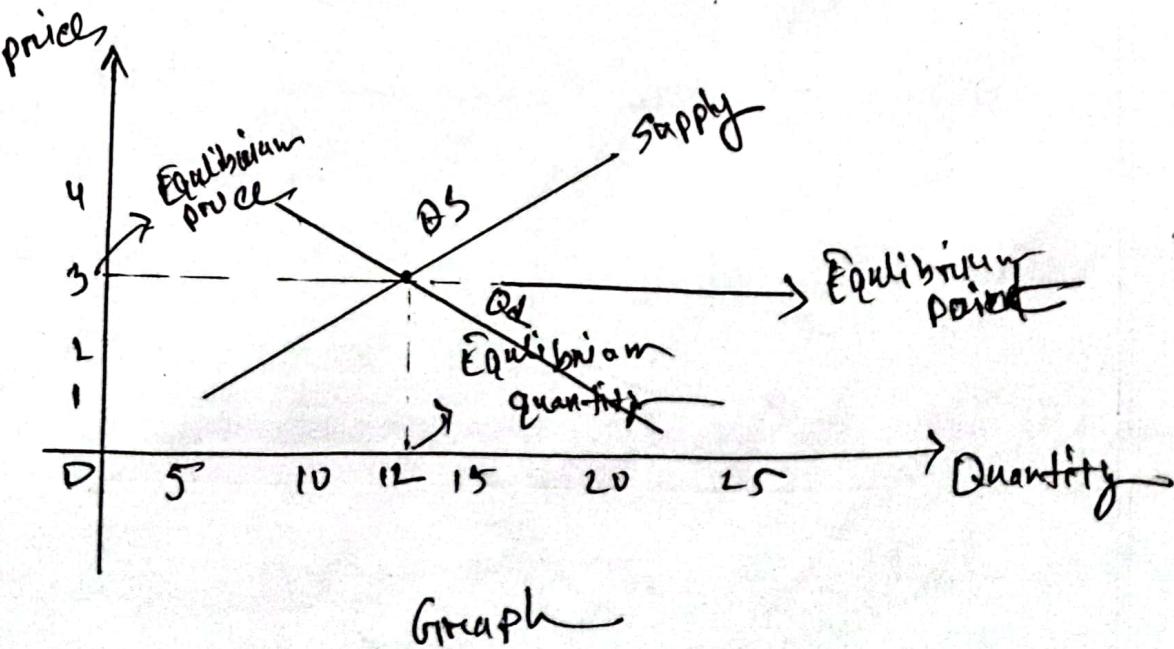
$$\Rightarrow 17P = 51$$

$$\Rightarrow P = 3 \quad [\text{Equilibrium point}]$$

Now,

$$Q_S = 13P - 27 = 12 \quad \rightarrow \text{Equilibrium Quantity}$$

$$Q_D = -4P + 24 = 12$$



Graph