Principles of Economics (Spring 2024)
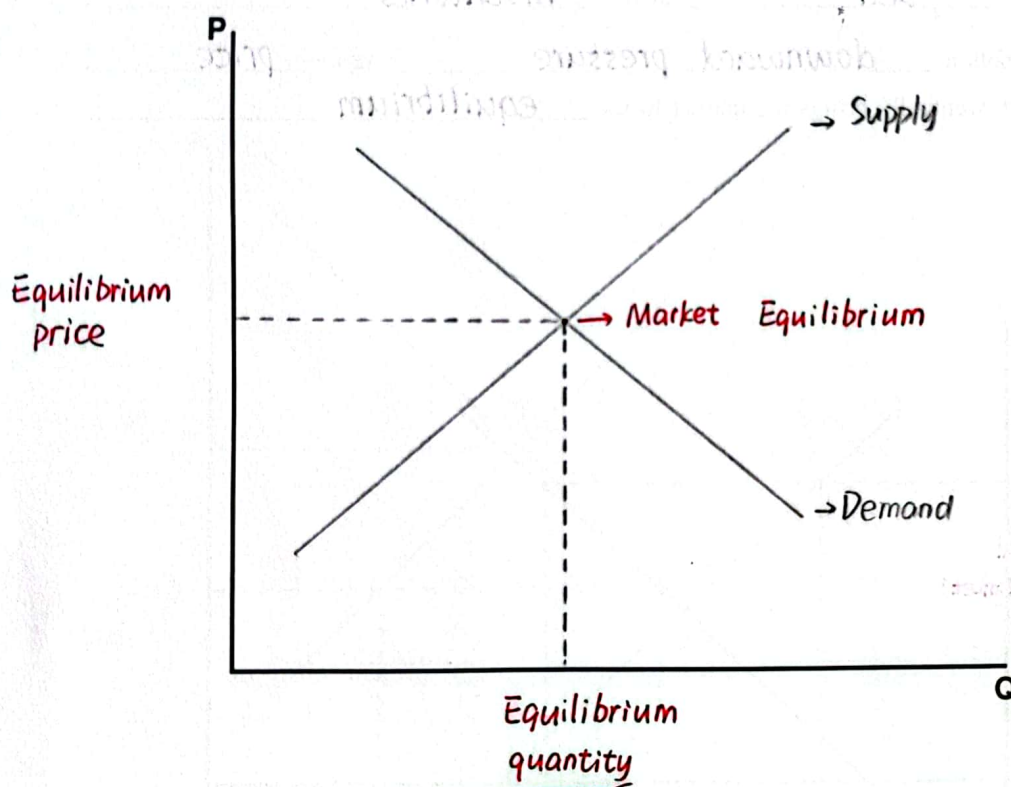**Lecture 5**
Market Equilibrium

Part I

Market Equilibrium – A situation in which __quantity demanded__
__equals quantity supplied__.

- __Equilibrium price__ occurs when Q^D __=__ Q^S,
and this quantity is called __equilibrium quantity__.


a good situation as there is no leftover nor shortage
all demand is satisfied

However, it's not guaranteed to be at this point!

Part II

Disequilibrium

- **Surplus** – A situation in which ___quantity supplied___ is ___greater___ than ___quantity demanded___, occurs when the ___price___ is ___higher___ than the ___equilibrium price___.

    ⇒ Some ___sellers___ are ___willing___ to ___accept lower prices___ to ___sell___ their ___inventories___.

    ⇒ It puts a ___downward pressure___ on the ___price___, and eventually brings the market to the ___equilibrium___.

P

P~ (the actual price in Market)

Pe

E

Q^D   Q^S   Q
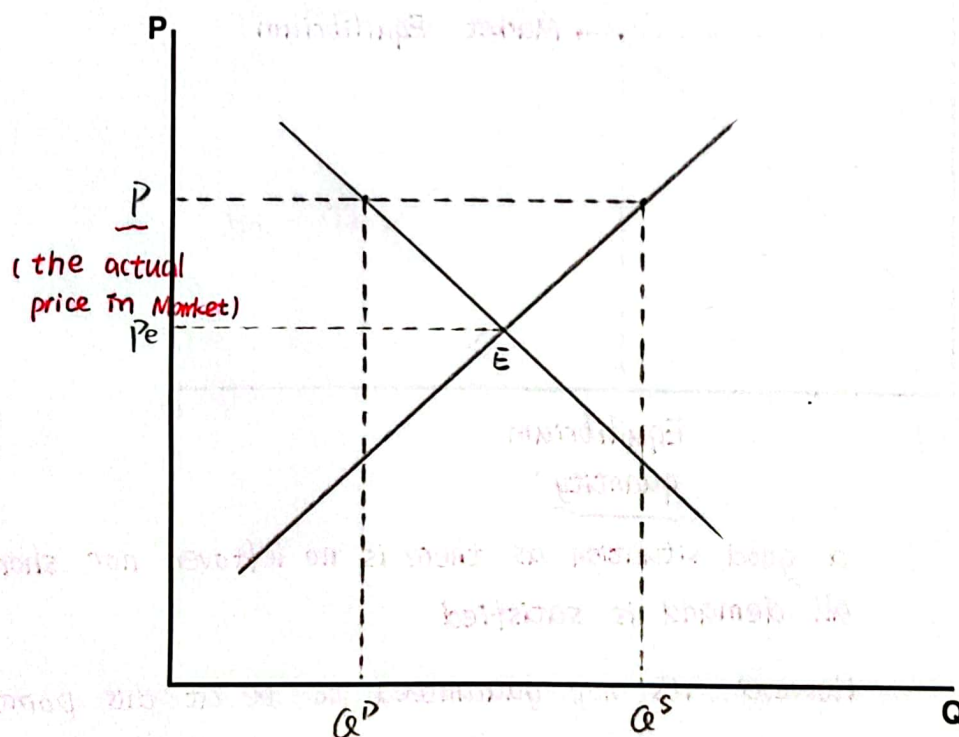
➢ Q^S ___>___ Q^D

- **Shortage** – A situation in which quantity demanded is ____~~hi~~ greater____ than quantity supplied, occurs when the _actual_ __price____ is ____lower____ than the ____equilibrium price_____.

  ⇒ Some ____buyers____ are ____willing____ to ____pay more____ than the ____prevailing price____ to ____ensure____ that ____they can get the good____.

  ⇒ It puts an ____upward____ pressure____ on the ____price____, and eventually brings the market to the ____equilibrium price____.
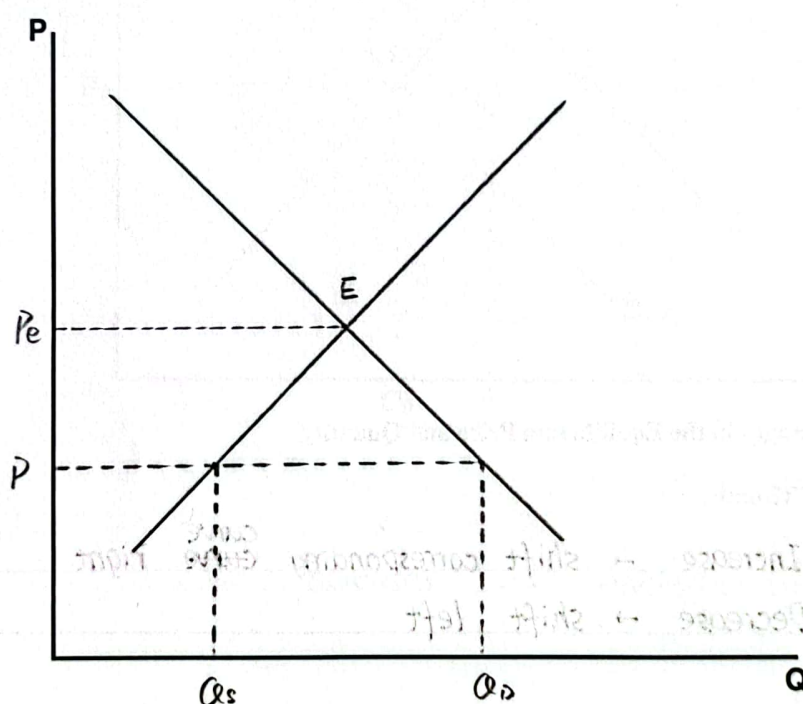
➢ Q^D _$>$_ Q^S

Exercise 1

The graph below shows a market with initial equilibrium price of $10 and quantity of 100 units.
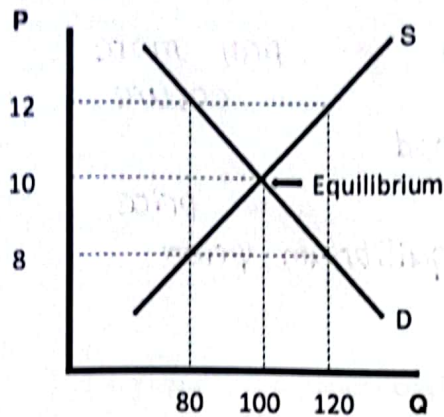
1) If the price were at $12, the quantity demanded would be ___80___ and the quantity supplied would equal ___120___. There would be a ___surplus___ in this market.

2) If the price were at $8, the quantity demanded would be equal to ___120___ and the quantity supplied would be ___80___. There would be a ___shortage___ in this market.

Part III

Predict Changes in the Equilibrium Price and Quantity

- **Rule of Thumb**
  - ___Increase → shift corresponding ~~curve~~ curve right___
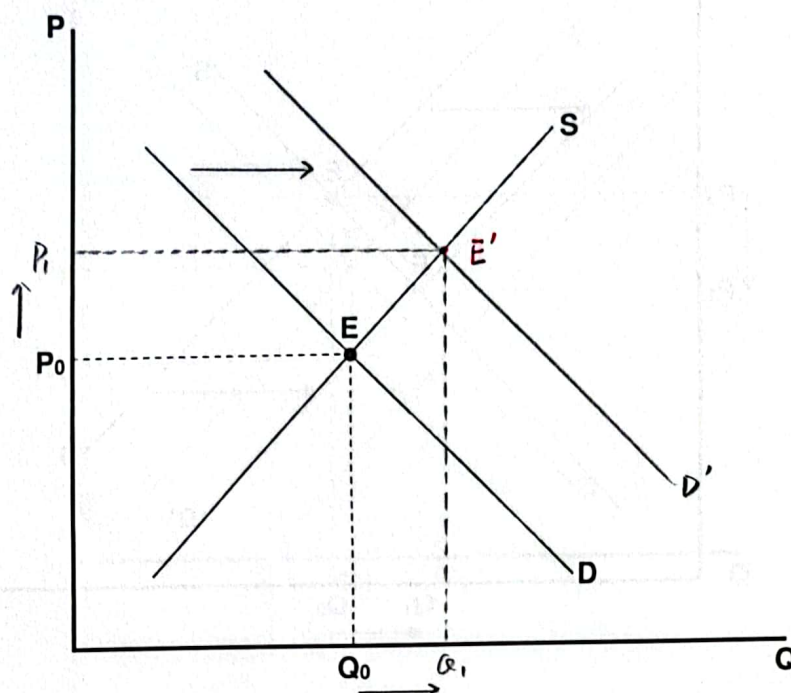 - ___Decrease → shift left___

- **One Side of the Market Changes**

  o **An Increase in Demand**

    ▪ ___Right shift_____ of the ___demand_____ curve

➤ ___Price increases___ and ___Quantity increases___.

demand ↑ → Equilibrium price ↑
lack in change of Price
                        ⟩ shortage → P↑ Q↑

- ○ **A Decrease in Demand**

  - ▪ ___Left shift___ of the ___demand___ curve
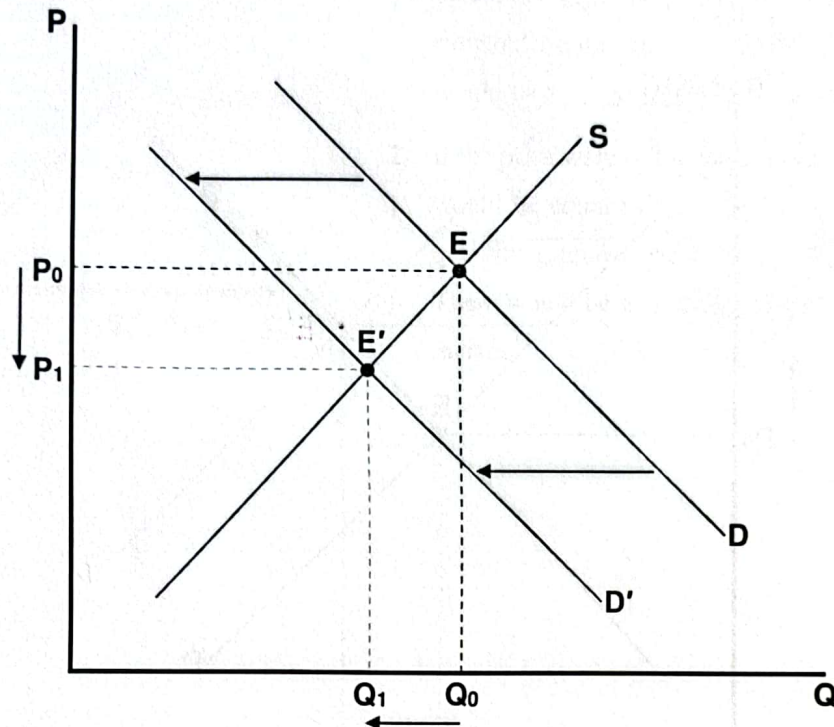
  - ➢ ___P decrease___ and ___Q decrease___.

○ **An Increase in Supply**

▪ _____Right shift_____ of the ____supply_____ curve
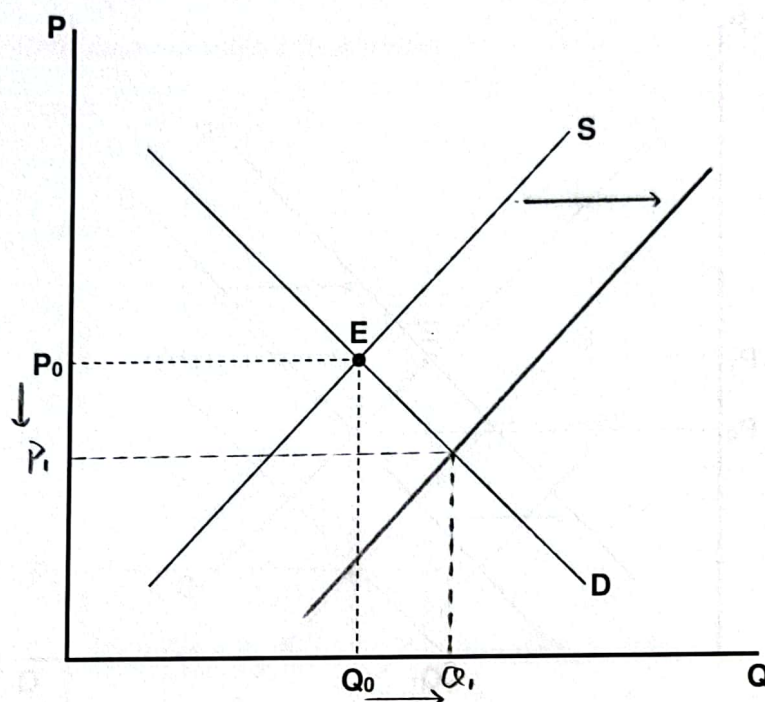
P decrease _____ and _____ Q increase _____.

○ **A Decrease in Supply**

• ___Left   shift_____ of the ___supply___ curve
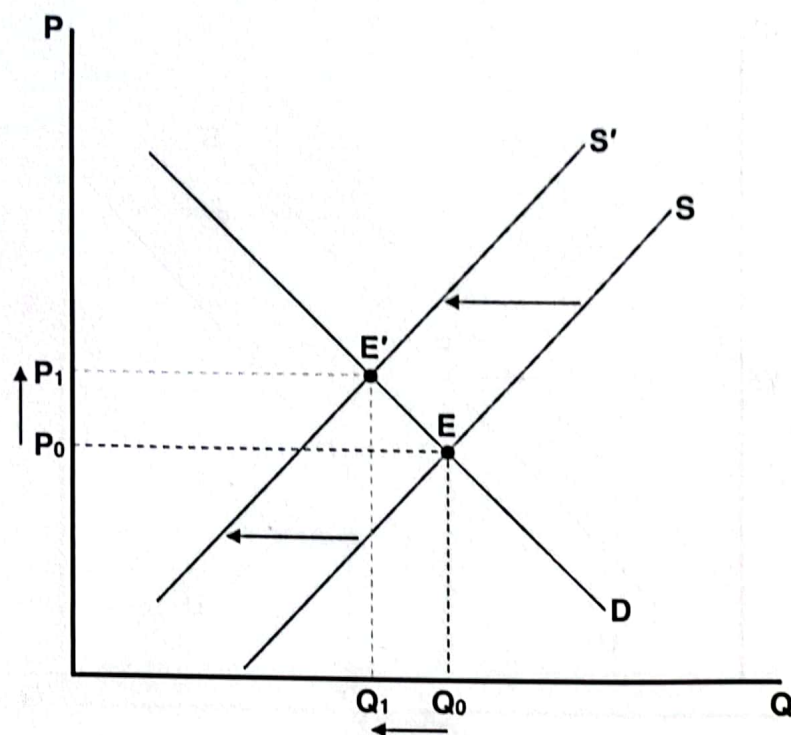
➤ ___P increase___ and ___Q decrease___.

- **Both Sides of the Market Change** – It ___*depends*___ on the ___*extend*___ of ___*changes*___ in the ___*curve*___ to ___*determine*___ the ___*direction*___ of ___*changes*___ in the ___*equilibrium*___ ___price*___ and ___*quantity*___.

  o **Demand increases and supply increases**

    ▪ Case 1
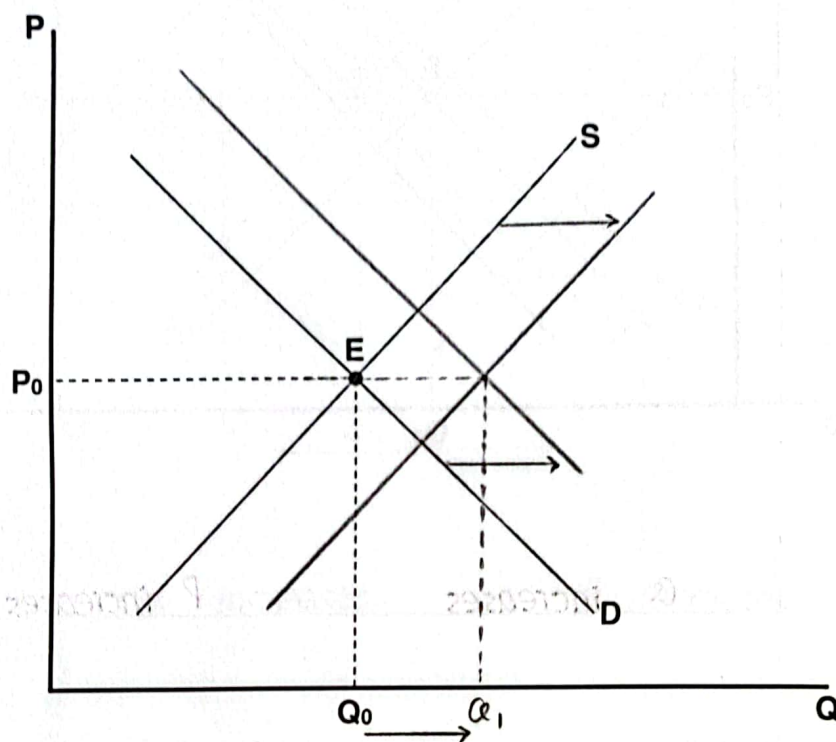
    ➢ ___*Quantity* Increase___ and ___*Price stays*___ the ___*same*___.

- Case II
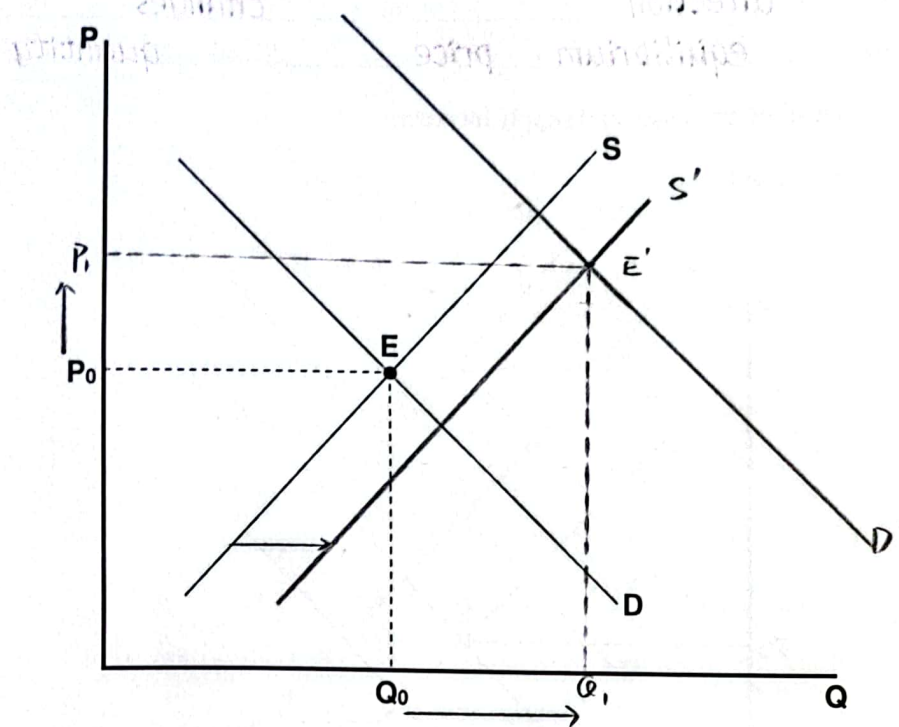
➢ ___Q increases___ and ___P increases___ .

- Case III
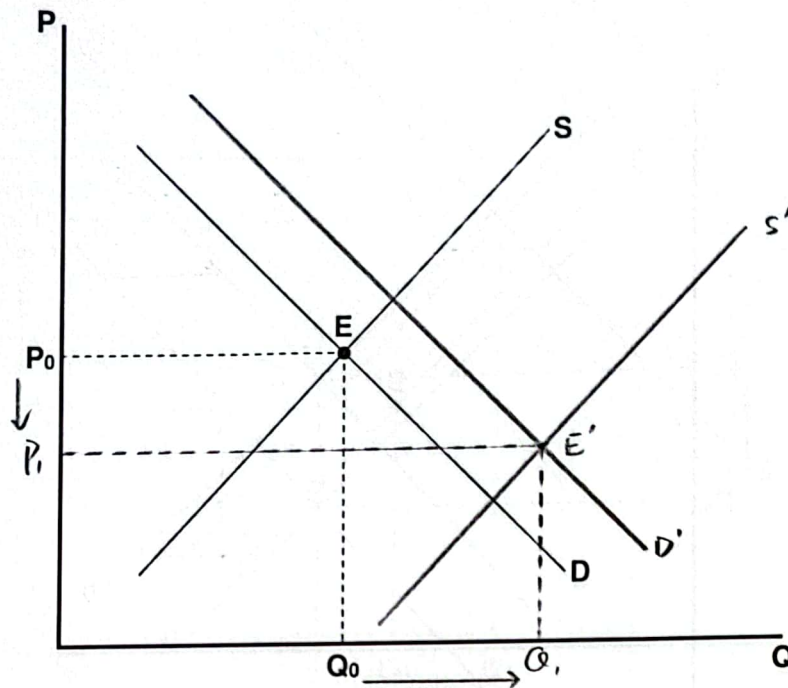
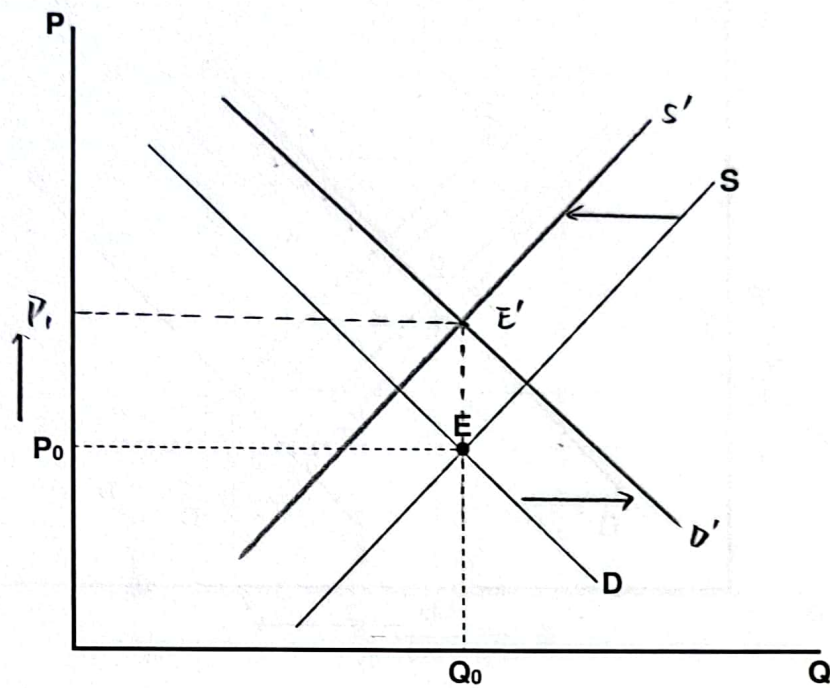> _____ Q increases _____ and _____ P decreases _____.

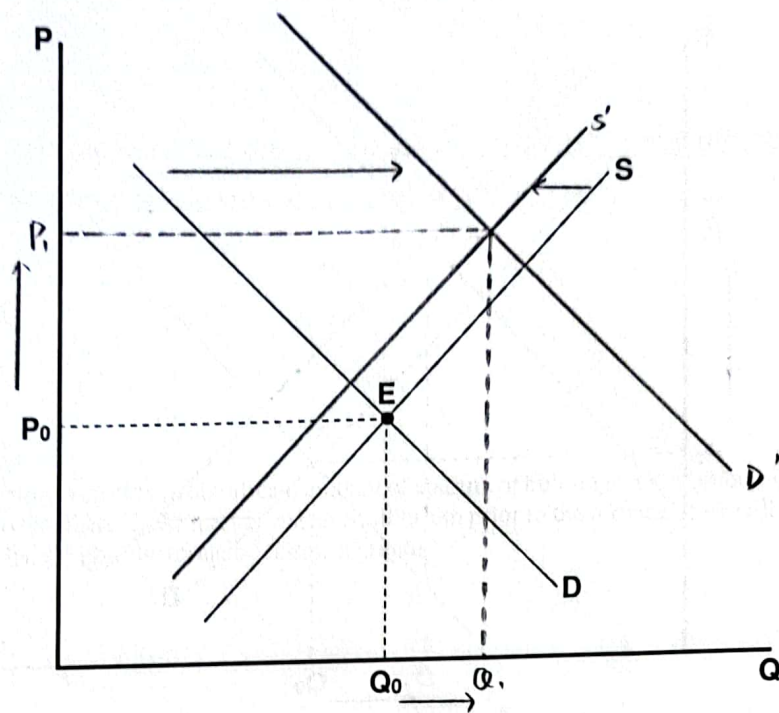❖ When demand and supply both increase, _quantity increases for sure_____, but it is _uncertain how price will change_____.
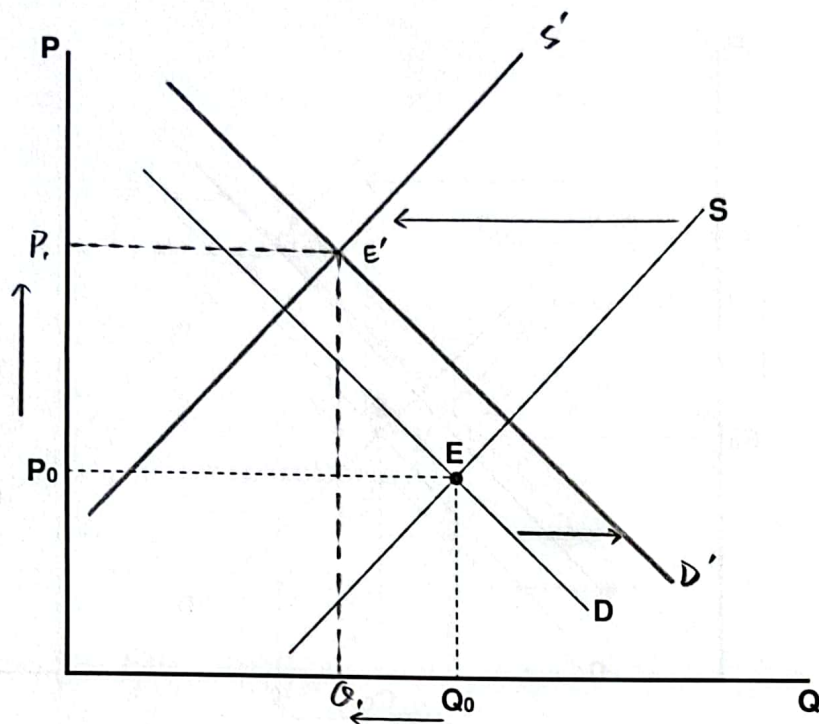
- Demand increases and supply decreases

  - Case I

➤ P increases and Q stays the same .

- Case II

▷ _____ P increases _____ and _____ Q increases _____.

- Case III

➤ _____ P increases _____ and _____ Q decreases _____ .

❖ When demand increases and supply decreases, _____ Price increases _____ for sure, but it is uncertain how _____ Quantity _____ will change.

- o **Demand decreases and supply decreases** – _____quantity decreases_____
  for sure, but it is uncertain how _____price_____ will change.

- o **Demand decreases and supply increases** – _____price decreases_____
  for sure, but it is uncertain how _____quantity_____ will change.

Exercise 2

Suppose a tornado destroys a significant amount of apartment buildings in Columbus, but has no effect on people's desire to live there. If the market was in equilibrium prior to the tornado, how will the equilibrium price and quantity change after the tornado? (Draw a graph)
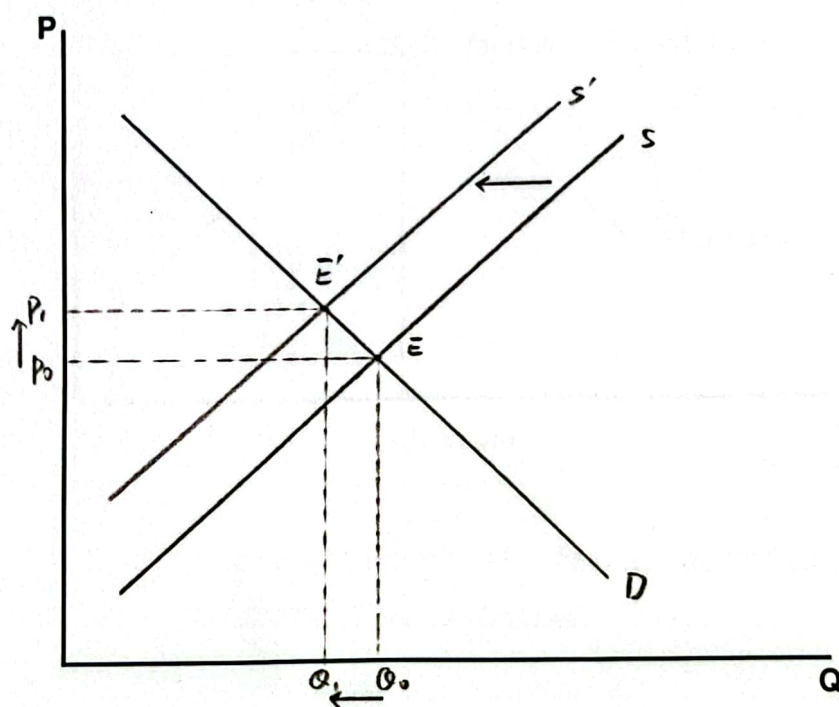
Equilibrium price increase
quantity decrease