Answer on Question #62291, Economics / Microeconomics

If demand for show tickets is described by the equation $Q_D = 100 - p$, and supply is $Q_S = 20 + p$, find the equilibrium price and quantity. How would you answer change if the supply curve shifted to due to increases in actor salaries? What would the supply curve look like if the capacity of the theatre was 50 people?

Answer:

Set $Q_D = Q_S$

For

$$Q_S = 20 + p$$

$$100 - p = 20 + p$$

$$P^* = 40$$

$$Q^* = 60$$

Set $Q_D = Q'$

It is not known how the supply curve shifted due to increases in actor salaries. Not specified in the question, then the shifts of the supply curve denote by $Q' = x+p$. Knowing x, we easy find p^* and Q^*.

For

$$Q' = x+p$$

$$100 - p = x+p$$

$$P^* =$$

$$Q^* =$$

When the capacity of the theatre has been reached at 50 tickets, the supply curve becomes vertical, increases in price will have no effect on the number of tickets the theatre will supply.