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HW#6 Due March 4, 2021

9. At Fenway Park, home of the Boston Red Sox, seating is limited to about 38,000. Hence, the number of tickets issued is fixed at that figure. Seeing a golden opportunity to raise revenue, the City of Boston levies a per ticket tax of $5 to be paid by the ticket buyer. Boston sports fans, a famously civic-minded lot, dutifully send in the $5 per ticket. Draw a well-labeled graph showing the impact of the tax. On whom does the tax burden fall—the team's owners, the fans, or both? Why?
10. A market is described by the following supply and demand curves:

$$Q^S = 2P$$
$$Q^D = 300 - P$$

   a. Solve for the equilibrium price and quantity.

   b. If the government imposes a price ceiling of $90, does a shortage or surplus (or neither) develop? What are the price, quantity supplied, quantity demanded, and size of the shortage or surplus?

   c. If the government imposes a price floor of $90, does a shortage or surplus (or neither) develop? What are the price, quantity supplied, quantity demanded, and size of the shortage or surplus?

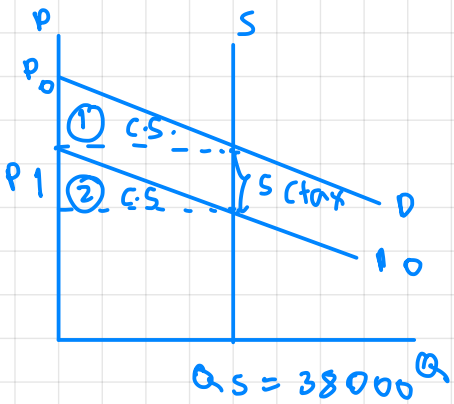
   d. Instead of a price control, the government levies a tax on producers of $30. As a result, the new supply curve is:

$$Q^S = 2(P - 30).$$

   Does a shortage or surplus (or neither) develop? What are the price, quantity supplied, quantity demanded, and size of the shortage or surplus?

a.) given that $Q_S = 38{,}000$

In this case, supply curve is perfectly inelastic, therefore the entire tax burden is on supplier because the supplier have to reduce the price, without changing $Q_S$ in order to sell the tickets for the same amount (38,000)




Demand curve shift down because they have to pay more $5 tax a ticket

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10.) $Q_S = 2P \longrightarrow P = \frac{Q_S}{2}$

$Q_D = 300 - P$

$P = 300 - Q_D$

a.) Equilibrum price and quantity

Find P

$Q_S = Q_D$

$2P = 300 - P$

$3P = 300$

$P = 100$

Find Q

$Q_S = 2P$

$Q_S = 2(100)$

$Q_S = 200$

or $Q_D = 300 - P$

$Q_D = 300 - 100$

$Q_D = 200$

b) Price ceiling of \$90 ($P_{max}$) is below Equilibrum price

$Q_d = 300 - P$

$Q_d = 300 - 90$

$Q_d = 210$

Find $Q_S$

$Q_S = 2P$

$Q_S = 2(90)$

$Q_S = 180$

$\therefore Q_d > Q_s$ (excess demand)

we can conclude that there is a shortage in quantity supply $210 - 180 = 30$ units

C.) price floor is 90$ ($P_{min}$) when equilibrium price is 100 $ ($P_0$), therefore the price floor is not binding in this cause, because the aim of price floor is to increase the market price, if we set price floor below equilibrum price, then the market will continue its mechain, at price 100

$Q_D$, $Q_S$ } 200

Neiter surplus or shortage would develop

D.) govn't levis tax on producer 50$

$Q_S = 2(P-30)$ , $Q_D = 300 - P$

at $E_{new}$ ( $Q_S = Q_D$

$2P - 60 = 300 - P$

$3P = 360$

$P = 120$

$Q_D = 300 - 120$

$Q_D = 180$

$Q_S = 180$

$E_{new}$ (180, 120)

therefore, neither surplus nor shortage would develop