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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?

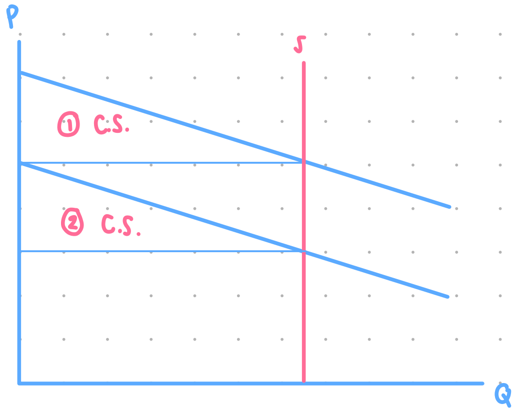
c. If the government imposes a price floor of $90, does a shortage or surplus (or neither) develop? What are the price, quantity supplied, quantity demanded, and size of the shortage or surplus?

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?

9) given that $Q_s : 38,000$



Demand curve shift down because they have to pay more 5 dollars tax per ticket.

· the supply curve is perfectly inelastic, so the entire tax burden is on the supplior because the supplier have to decrease the price, without changing Q_s in order to sell the tickets for the same quantity.

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10) $Q_s = 2P \longrightarrow P = \frac{Q_s}{2}$

$Q_D = 300 - P \longrightarrow P = 300 - Q_D$

a) Equlibrium price and quantity.

Find P

$Q_s = Q_D$

$2P = 300 - P$

$3P = 300$

$P = 100$

Find Q

$Q_s = 2P$ or $Q_D = 300 - P$

$Q_s = 2(100)$ $Q_D = 300 - 100$

$Q_D = 200$ #

b) Price ceiling of 90 dollar (P_{max}) in below : Equilibrium price

Find Q_D

$Q_d = 500 - P$

$Q_d = 500 \; 90$

$Q_d = 10$

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 $= P_{min} = 90\$$, at equilibrium price $= 100\$$, so the price floor is not binding, the price floor must be under equilibrium price, then the marked will continue its machanism when $P = 100$

Neither surplus or shortage would develop.

D) Gov levies tax on producer $= 30$

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

at new equil, $Q_s = Q_D$

$2P - 60 = 300 - P$

$3P = 360$

$P = 120$ #

$Q_D = 300 - 120$

$= 180$

$Q_s = 150$ #

$\therefore$ Hence, neither surplus or shortage would develop

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