HW#8 Due March 1, 2022

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?

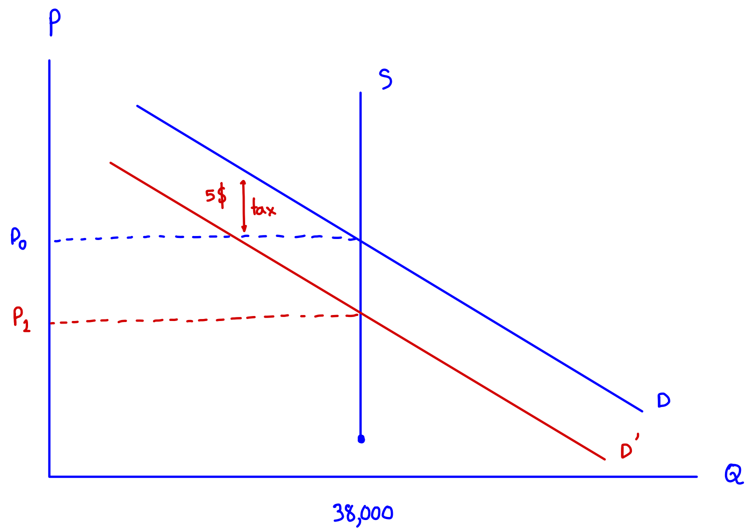
   c. If the government imposes a price floor of $90, does a shortage or surplus (or neither) develop? What are the price, quantity supplied, quantity demanded, and size of the shortage or surplus?

   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.



Tax burden will fall to seller because when Boston sport fans know that they have to pay tax 5 \$ included in ticket, sellers have to decrease ticket price down and plus tax to be equal to same price before tax.

10. (a) equilibrium: price and quantity are equal

$Q_S = Q_D = Q$

$Q = 2P$

$Q = 300 - P$

$2P = 300 - P$

$3P = 300$

$P = 100$

find Q

$Q = 2P$

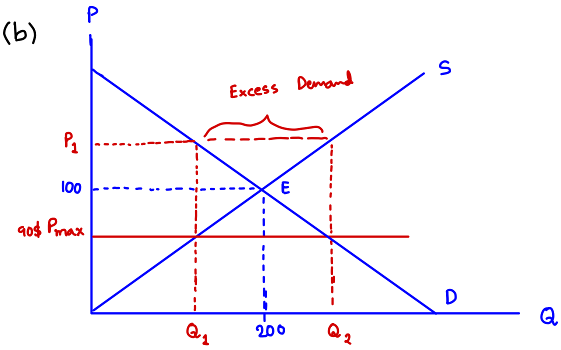
$Q = 2(100)$

$Q = 200$

Equilibrium point

$P = 100$, $Q = 200$

(b)

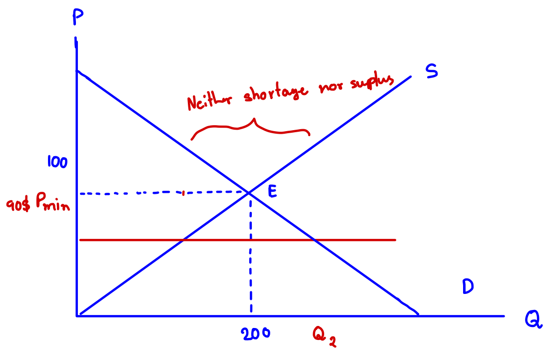


shortage on quantity = size is equal $Q_2 - Q_1$

Price will be at 90 \$ because buyers want to buy at the lowest price.

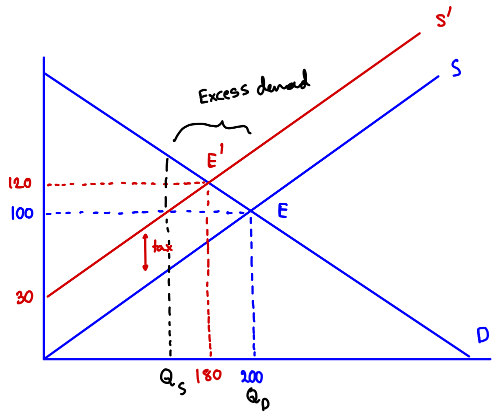
$\left.\begin{array}{l}\text{Quantity supply will be at } Q_1 \\ \text{Quantity demand will be at } Q_2\end{array}\right\}$ Excess demand

(c)



Nothing will be changed from govt. enforcement because buyers and sellers will do the transaction at equilibrium.

(d)



$Q_S = $ $Q_S = 2(P - 30)$

$Q_S = 2P - 60 \longleftrightarrow Q_D = 300 - P$

$Q_D = 300 - P$

Equilibrium

$Q_S = Q_D$

$2P - 60 = 300 - P$

$3P = 360$

$P_E = 120$

$Q = 2(120) - 60$

$Q_E = 180$

New equilibrium

$E = (180, 120)$

There are shortage on quantity (Excess Demand)

size = $Q_D - Q_S$