

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:

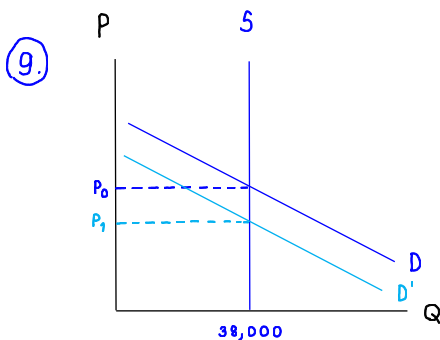
$$Q^S = 2P$$

$$Q^D = 300 - P$$

- Solve for the equilibrium price and quantity.
- 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?
- 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?
- 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?



Since the supply for this case is inelastic so the tax burden falls on the team's owner because the team's owner can't increase the price to be able to get the same amount of money. Therefore the price to seller reduce.

10.

(a) At Equilibrium (Q_0, P_0)

$$Q_D = Q_S$$

$$2P = 300 - P$$

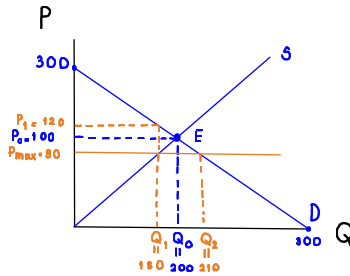
$$3P = 300$$

$$P = 100$$

$$Q_S = 2(100) = 200$$

$$\therefore (Q_0, P_0) = (200, 100)$$

(b) $P_{\max} = 90$



At $P_{\max}$, there will be excess $D = Q_2 - Q_1 > 0$

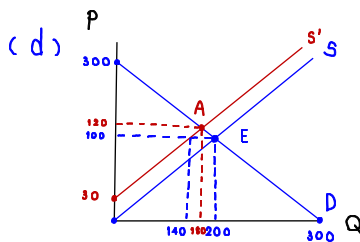
$$\bullet Q_D = 300 - P = 300 - 90 = 210$$

$$\bullet Q_S = 2P = 2(90) = 180$$

$$\bullet \text{Size of shortage in supply} = 210 - 180 = 30$$

(c) $P_0 = 100, P_{\min} = 90$

Neither shortage nor surplus will develop because the imposition of floor price is intended to increase the market price so in case $P_{\min}$ is less than P_0 , there is no change in the market.



(d)

At point A (new equilibrium), $Q_D = Q_S$

$$\bullet Q_D = 300 - P = 300 - 120 = 180$$

$$\bullet Q_S = 2(P - 30) = 2(120 - 30) = 180$$

$\therefore$ Neither shortage or supply develop.