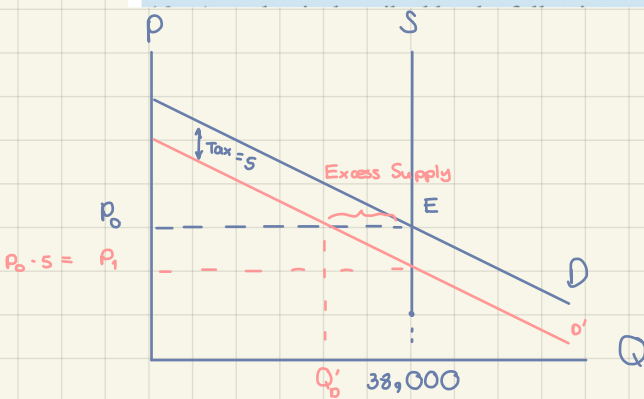


9. At Fenway Park, home of the Boston Red Sox, seating is limited to about 38,000. Hence, the number of tickets issued is fixed at that figure. Seeing a golden opportunity to raise revenue, the City of Boston levies a per ticket tax of \$5 to be paid by the ticket buyer. Boston sports fans, a famously 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?



$$\frac{N_s}{N_{ol}} = \frac{\text{tax burden on the buyer}}{\text{tax burden on the seller}}$$

- since N_s is 0 (perfectly inelastic), the buyer bears no tax burden at all
- Tax burden falls to sellers only because the sellers get the price \$5 lower while the buyer pay the same price

10. A market is described by the following supply and demand curves:

$$Q^S = 2P \quad - \quad P = \frac{1}{2}Q$$

$$Q^D = 300 - P$$

- 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:

$$Q^S = 2(P - 30) \quad - \quad P = \frac{1}{2}Q + 30$$

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

$$a) \quad Q_s = Q_D$$

$$2P = 300 - P$$

$$3P = 300$$

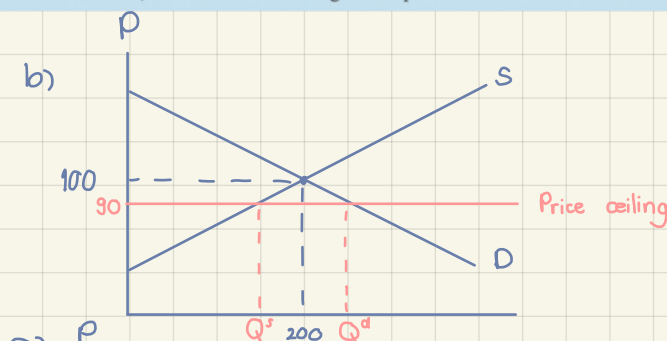
$$P_E = \$100$$

$$Q_E = 2(P_E)$$

$$= 2(100)$$

$$= 200 \text{ units}$$

equilibrium point $(P, Q) = (100, 200)$



At price = \$90

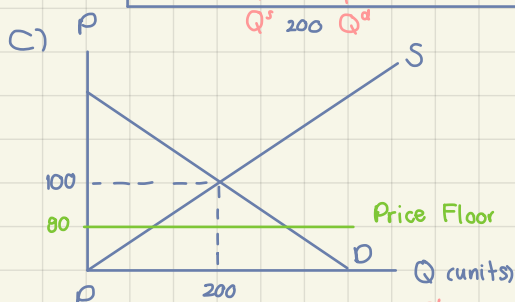
$$Q_D = 2(90) = 180$$

$$Q_S = 300 - 90 = 210$$

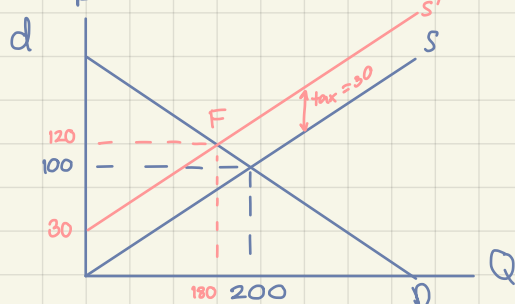
$\therefore$ There is an excess demand (shortage)

$$= 210 - 180 = 30 \text{ units at price}$$

$$\text{ceiling} = \$90$$



no effect because price floor (minimum price traded in market) lowers than the price that is normally traded.



new eq. point F

$$2(P - 30) = 300 - P$$

$$3P = 360$$

$$P = 120$$

$$Q = 180$$

$$(P, Q) = (120, 180)$$

At $P = 100$,

$$Q_S = 2(100 - 30) = 140$$

$$Q_D = 300 - 100 = 200$$

$$\text{There is an excess demand} = 200 - 140 = 60$$

$\therefore$ price tend to increase until there is no excess demand (at F)