

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:

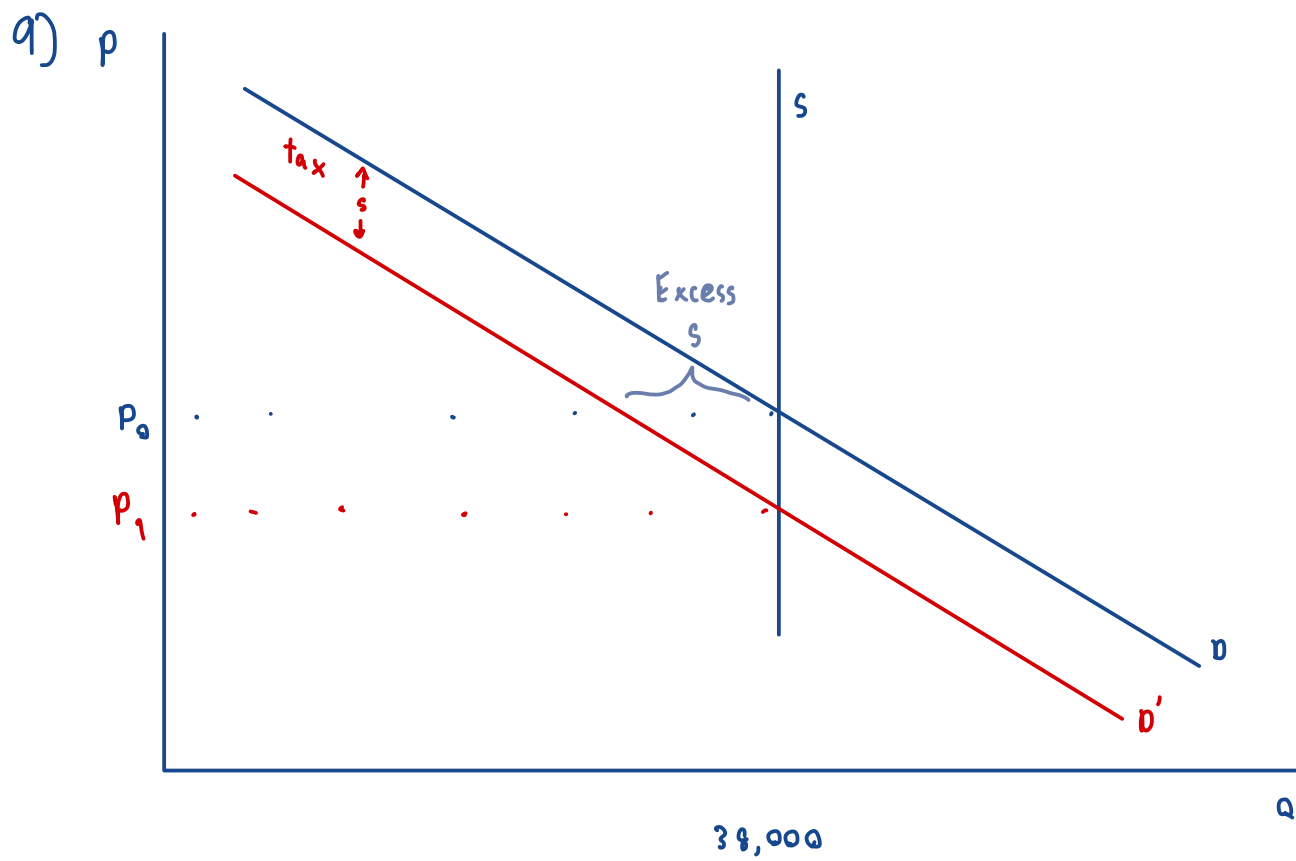
$$Q^S = 2P$$

$$Q^D = 300 - P$$

- 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?



Tax burden falls to seller because seller get lower $\$$ because of tax.
 On the other hand, buyer buy at the same price

10 (a) Equilibrium means quantity and price are the same

$$Q_D = Q_S$$

$$2P = 300 - P$$

$$\text{Equilibrium } P = 100$$

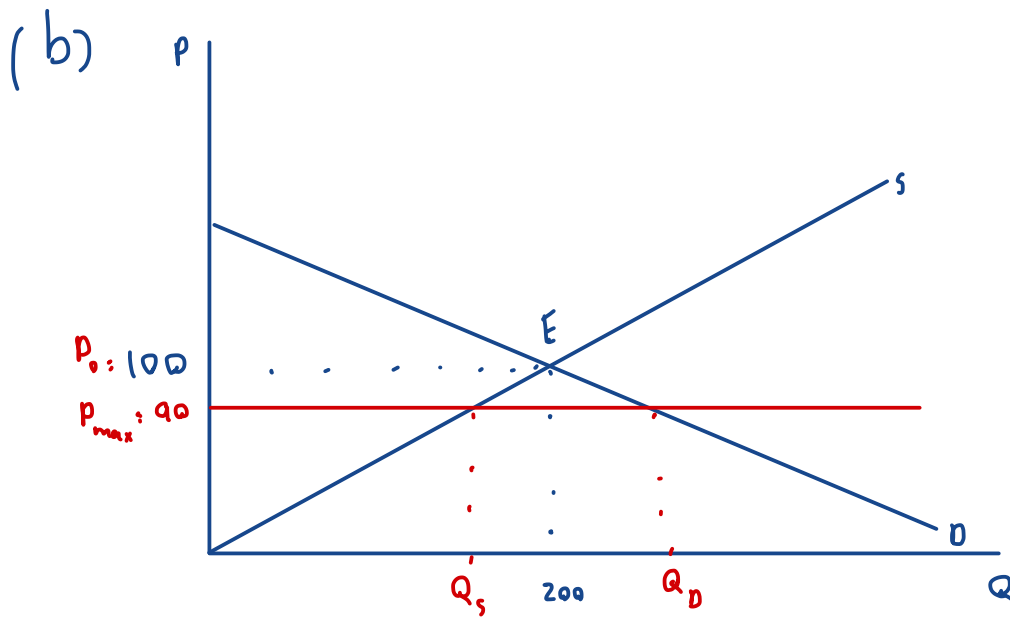
$$3P = 300$$

$$Q = 200$$

$$P = 100$$

Put P in Q_D or Q_S : $Q_S \rightarrow Q^S = 2(100)$
 $= 200$

$$Q_D \rightarrow Q^D = 300 - 100$$
$$= 200$$

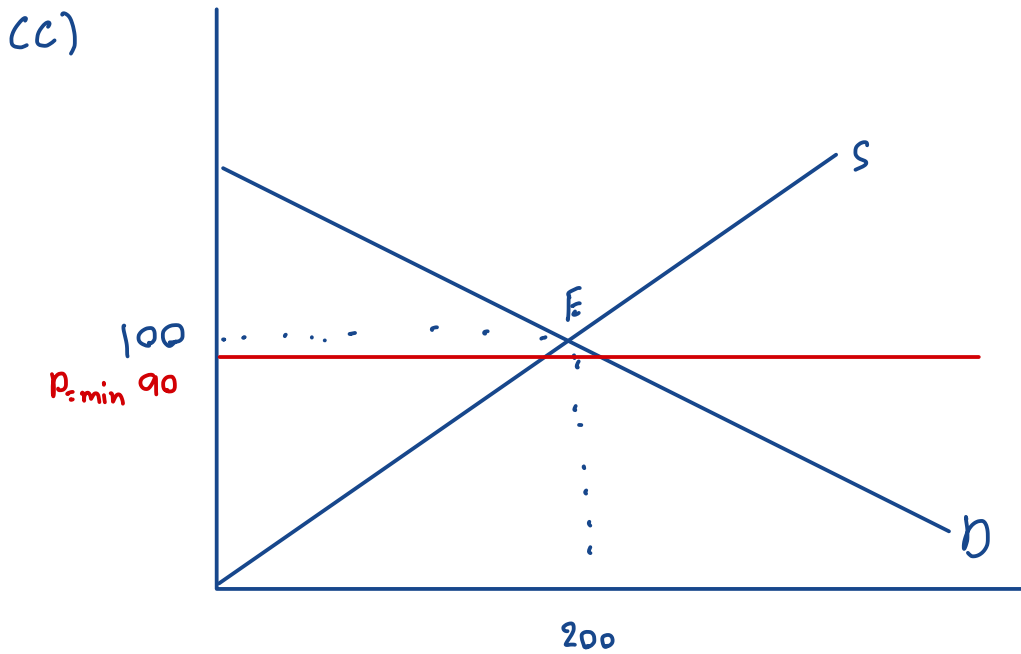


$$Q_S = 2(90) = 180$$

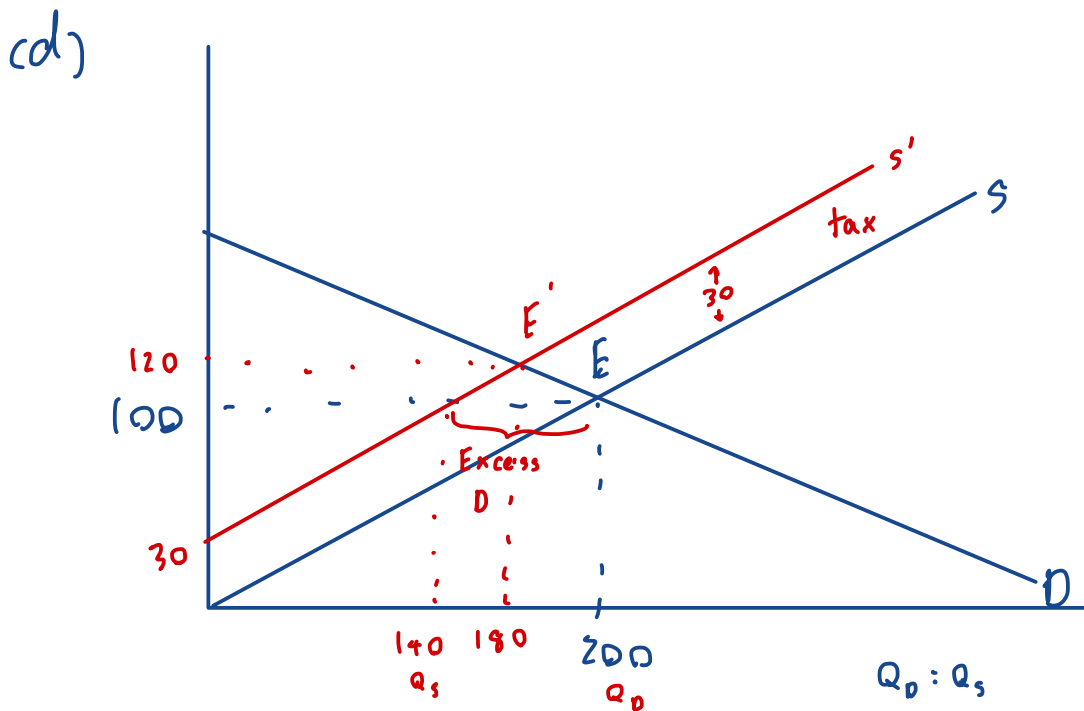
$$\text{Excess demand} = 210 - 180 = 30$$

$$Q_D = 300 - 90 = 210$$

Ans Quantity supply = 180 When Price = 90
Quantity demand = 210 When Price = 90
Excess demand (shortage) = 30



people will at 100 \$ because it is an equilibrium, Price that government create has no effect because it is lower than equilibrium



new equilibrium is at E' (120, 140)

Quantity Supply = 140 when Price = 100

Quantity demand = 200 when Price = 100

Excess demand (shortage) = $200 - 140 = 60$

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

$$300 - p = 2p - 60$$

$$360 = 3p$$

$$120 = p, Q = 140$$

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

$$Q_D = 700 - 100 = 200$$