HW#6 Due October 6, 2020

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:

$y = ax + h$

$$Q^S = 2P \rightarrow P = \frac{1}{2}Q_S$$
$$Q^D = 300 - P \rightarrow P = 300 - Q_D$$

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?

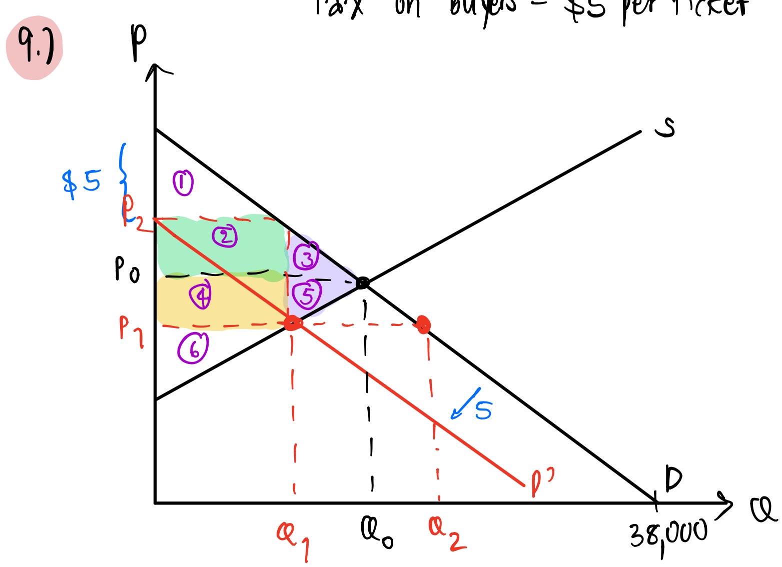
d. Instead of a price control, the government levies a tax on producers of $30. As a result, the new supply curve is:

$$\boxed{Q^S = 2(P - 30).}$$

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

Tax on buyers = $5 per ticket

9.)



	Before	After	Change
C.S.	1+2+3	1	−(2+3)
P.S.	4+5+6	6	−(4+5)

City of Boston's tax revenue

Deadweight-loss

10.)

a) $Q^d = Q_s$

$300 - p = 2p$

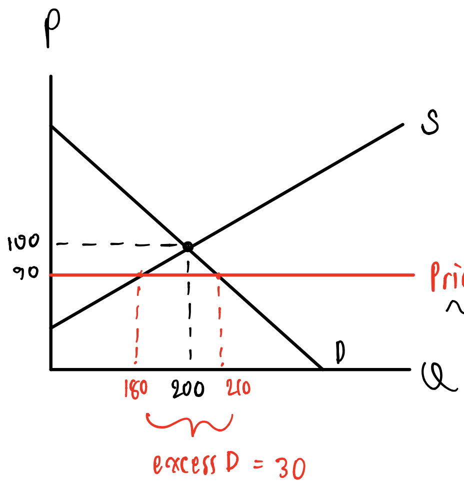
$300 = 3p$

$p = 100$

Equilibrium price = \$100

Equilibrium quantity = 200 tickets #

b.)



Price ceiling = \$90

= ราคาตอนแรกมันสูงเกินไป gov.เลยset ให้มันต่ำกว่า equilibrium ซึ่งเป็นราคาตลาด (ที่ตอนแรกสูงเกินไป)

set price \$90

$180 \leftarrow Q^s = 2P \quad (P = 90)$

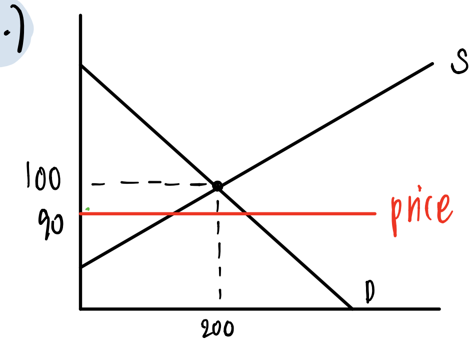
$210 \leftarrow Q^d = 300 - P \quad (P = 90)$

→ cause excess D. Hence, cause shortage

∴ size of shortage = 30 tickes

$(Q_D - Q_S)$

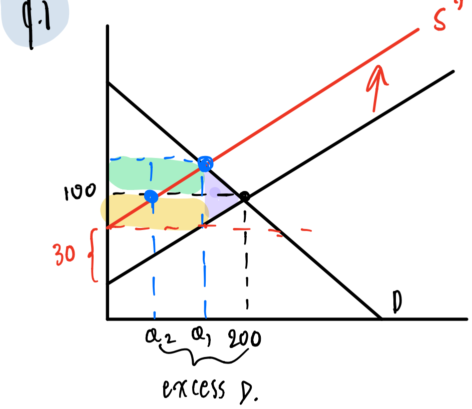
c.)



price floor = \$90

nothing would happen (both shortage & surplus) becuse price floor is the minimum price that be sold. However, the equilibrium price is \$100 where it already surpassed the minimum price set at \$ 90.

d.)



$Q_S = 2(P - 30)$

$\frac{Q_S}{2} = P - 30$

$P = \frac{Q_S}{2} + 30$

$\boxed{S: P = \frac{1}{2}Q_S + 30}$

A shortage had developed (since $Q_D - Q_S \neq 0$).
Therefore, the price increases due to the excess demand of the product in the market