

HW#6 Due March 4, 2021

$$Q_s = 38,000$$

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:

$$Q^S = 2P$$

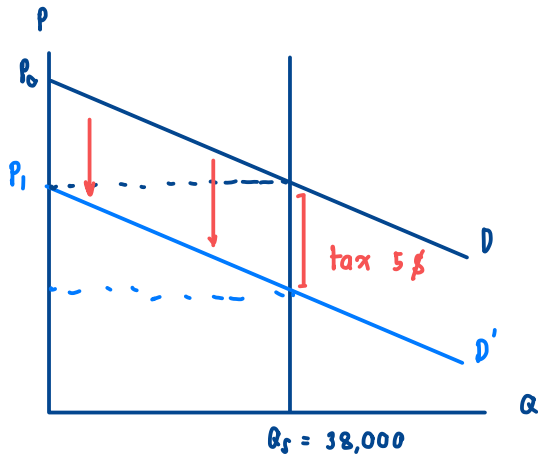
$$Q^D = 300 - P$$

- 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?

9 $Q_s = 38,000$



tax burden will impact to team's owners because team's owners have to reduce price in order to sell ticket with the same amount of 38,000.

10

$$Q^S = 2P$$

$$Q^D = 300 - P$$

a. Eq. price and quantity

find P	find Q
$Q_s = Q_D$	$Q_s = 2P$
$2P = 300 - P$	$Q_s = 200$
$P = 100$	

b P_{max} will be below the eq. price (shortage)

find Q_D	Q_s	$\therefore Q_D > Q_s$
$Q_D = 300 - P$	$Q_s = 2P$	excess demand
$Q_D = 300 - 90$	$Q_s = 2(90)$	
$Q_D = 210$	$Q_s = 180$	

\therefore There is a shortage in Q_s 30 units.

c. $P_{min} = 90\$$. At eq. price there is the same amount of quantity, so that there is no shortage and surplus in this case.

D. gov. levies tax on producer 30 \$

$$Q_s = 2(P-30) \quad Q_D = 300 - P$$

At E_q $Q_D = Q_S$

$$300 - P = 2P - 60$$

$$P = 120$$

$$Q_D = 300 - 120$$

$$Q_D \text{ and } Q_S = 180$$

$$E_q (180, 120)$$

\therefore surplus and develop will not occur.