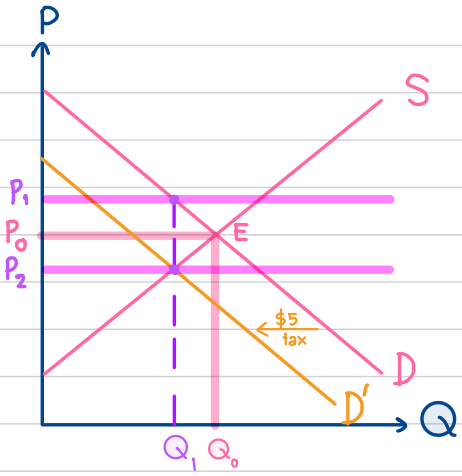
9. At Fenway Park, home of the Boston Red Sox, seating is limited to about 38,000. Hence, the number of tickets issued is fixed at that figure. Seeing a golden opportunity to raise revenue, the City of Boston levies a per ticket tax of $5 to be paid by the ticket buyer. Boston sports fans, a famously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



Initially, within the market, there is a equilibrium point at E where quantity of demand is P_0 and quantity of supplied is Q_0
As a producer increase the ticket price $5 in each unit due to the fact that there are only 38,000 tickets available plus that producer needs to pay tax $5 in each unit as well. Therefore, the price increase $5 inorder to get the same amount of money before tax access, the quantity of demanded will decrease: demand shift leftward from D to D' as buyers have to pay more so some might leave the market.
so the quantities decrease from Q_0 to Q_1
where buyer have to pay at P_1 : $P_1 > P_0$
producer receive money at P_2 : $P_2 < P_0$
government will get : $(P_1 - P_1)(Q_1)$

In conclusion, it can be said that :

	Before tax	After tax		
Buyers pay	P_0	P_1	: $P_1 - P_0 > 0$	= buyers pay more
Sellers get	P_0	P_2	: $P_2 - P_0 < 0$	= the team's owner receive less

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

$$Q^S = 2P$$
$$Q^D = 300 - P$$

a. Solve for the equilibrium price and quantity.

$Q^D = Q^S$

$300 - P = 2P$

$300 = 3P$

$100 = P$

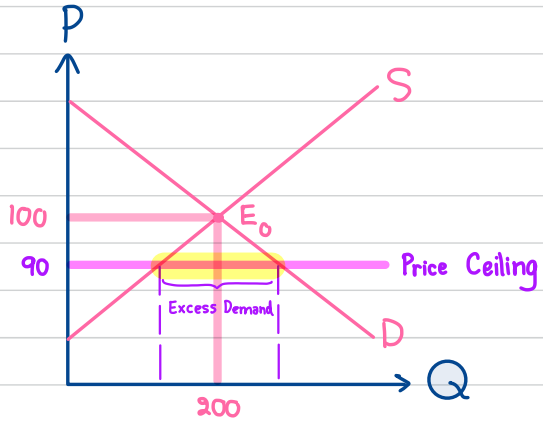
$Q^S = 2(100)$

$Q^S = 200$

Equilibrium at

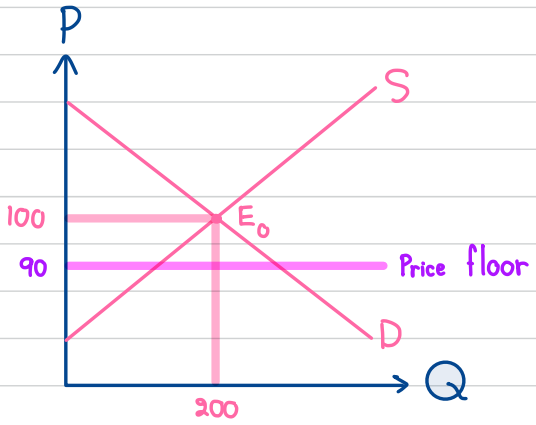
$(Q, P) = (200, 100)$

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?



As gov. imposes price ceiling of $90,
customers will have more willingness and ability to pay
new quantity of demand = 300 - 90 = 210 units
but sellers will have less willingness to sell.
new quantity of supply = 2(90) = 180 units
Therefore, there is an excess demand occur or can be said as a stortage in the market.
size of stortage : 210 - 180 = 30 units

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?



As gov. imposes price floor of $90,
it won't affect anything to sellers as price floor is the minimum price that sellers in the market can sell.
Therefore, the equilibrium point at E_0 still the same at Q = 200 and P = 100.
In conclusion, by using price floor policy, it won't affect anything in the market which means the government can't help any customers too.

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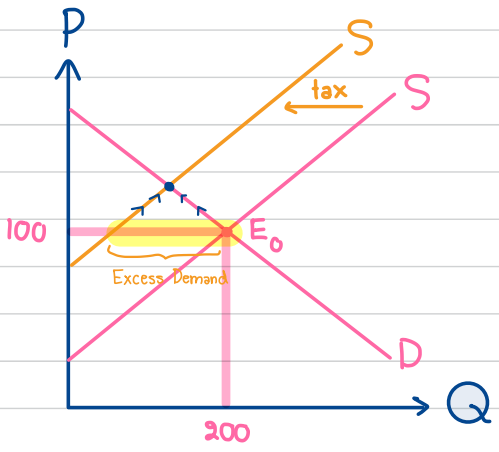
d. Instead of a price control, the government levies a tax on producers of $30. As a result, the new supply curve is:

$$Q^S = 2(P - 30).$$

$$= 2P - 60$$

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



As tax policy access, there will be a shortage develop
- quantity of demanded still the same
- quantity of suppled decrease → higher cost

As P = 100 + 30 = 130 $

Q^D = 300 - 130 = 170 $

Q^S = 2(130 - 60) = 140 $

There will be total stortage at 170-140 = 30 $

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