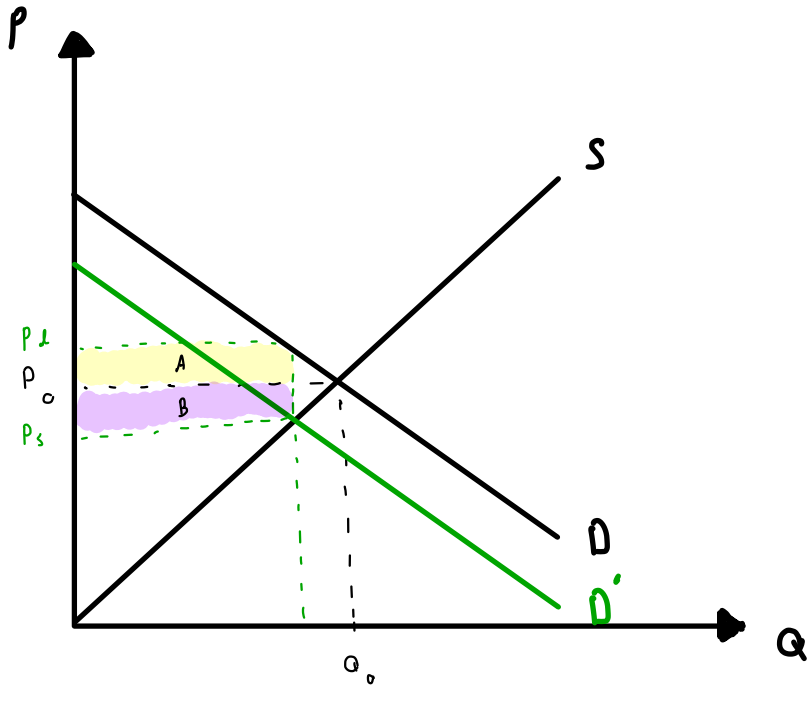
9. At Fenway Park, home of the Boston Red Sox, seating is limited to about 38,000. Hence, the number of tickets issued is fixed at that figure. Seeing a golden opportunity to raise revenue, the City of Boston levies a per ticket tax of $5 to be paid by the ticket buyer. Boston sports fans, a famously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



According to the graph, we cannot define whom tax burden will fall.

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.

$Q^D = Q^S$

$300 - P = 2P$

$300 = 3P$

$P = 100$

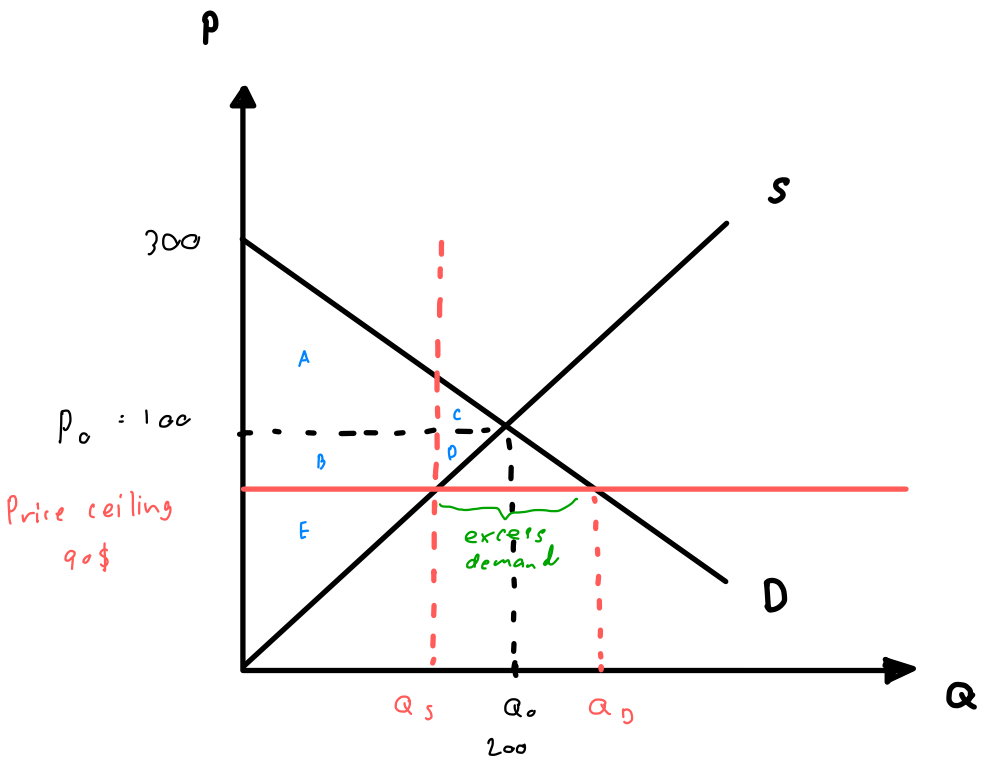
equilibrium price = 100

$Q = (2)(100)$

$Q = 200$

equilibrium quantity = 200

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?



- quantity supply : $Q_S = 2P$

$Q_S = (2)(90)$

$Q_S = 180$ ✗

- quantity demand $Q_D = 300 - P$

$Q_D = 300 - 90$

$Q_D = 210$

- the shortage is area C + D

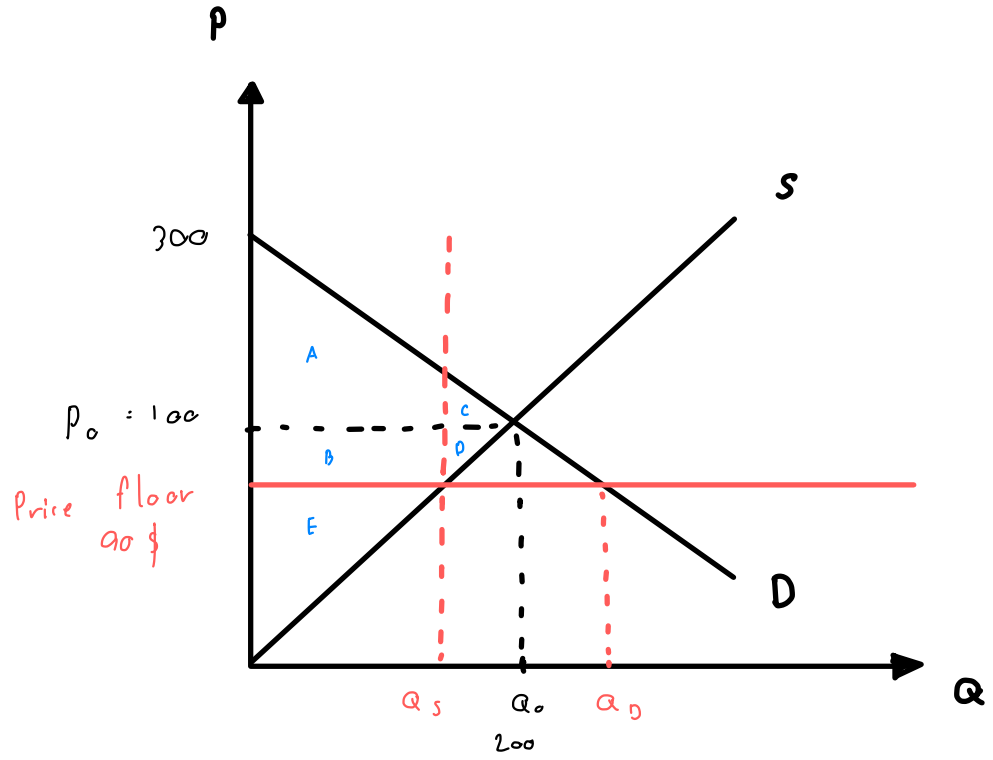
Consumer surplus :

Area A + Area B

Producer surplus : Area E

$= \frac{1}{2} \times 180 \times 90 = 8100$

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?



It is the same ans with question b.

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

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

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

$Q^S_{new} = 2P - 60$

$Q^S_{new} = Q^D$

$2P - 60 = 300 - P$

$3P = 360$

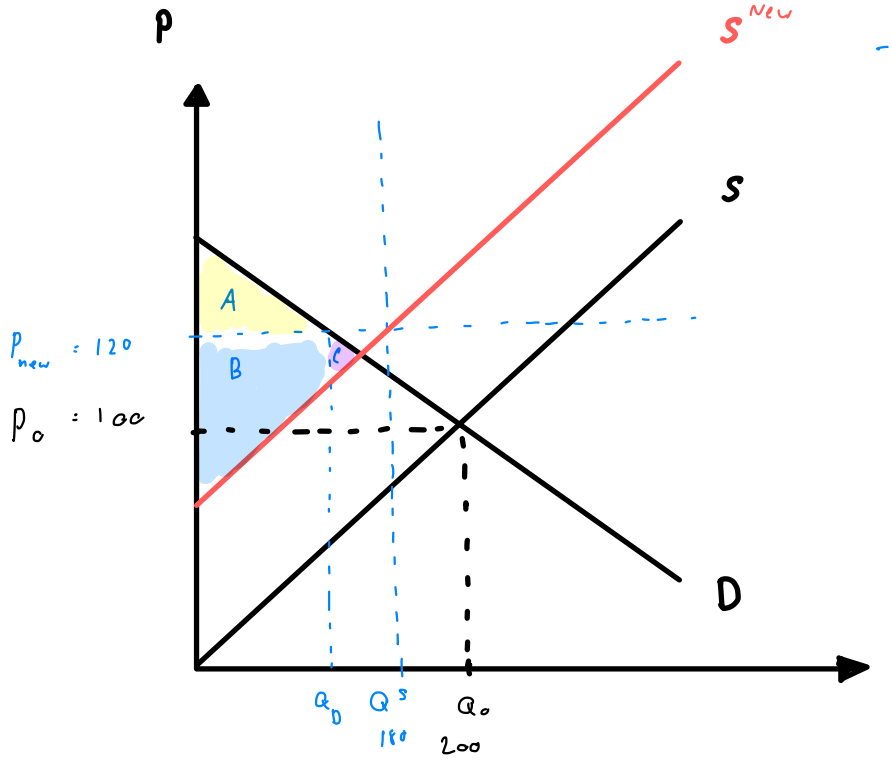
$P = 120$

Find Q

$Q^S_{new} = (2)(120) - 60$

$Q^S_{new} = 240 - 60$

$Q_{new} = 180$



- Quantity supply will decrease from 200 to 180.

- And quantity demand also decreases due to increasing of price

- Shortage is area C

- Producer surplus is area A

- Consumer surplus is area B