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HW#6 Due March 4, 2021

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:

$$Q^S = 2P$$

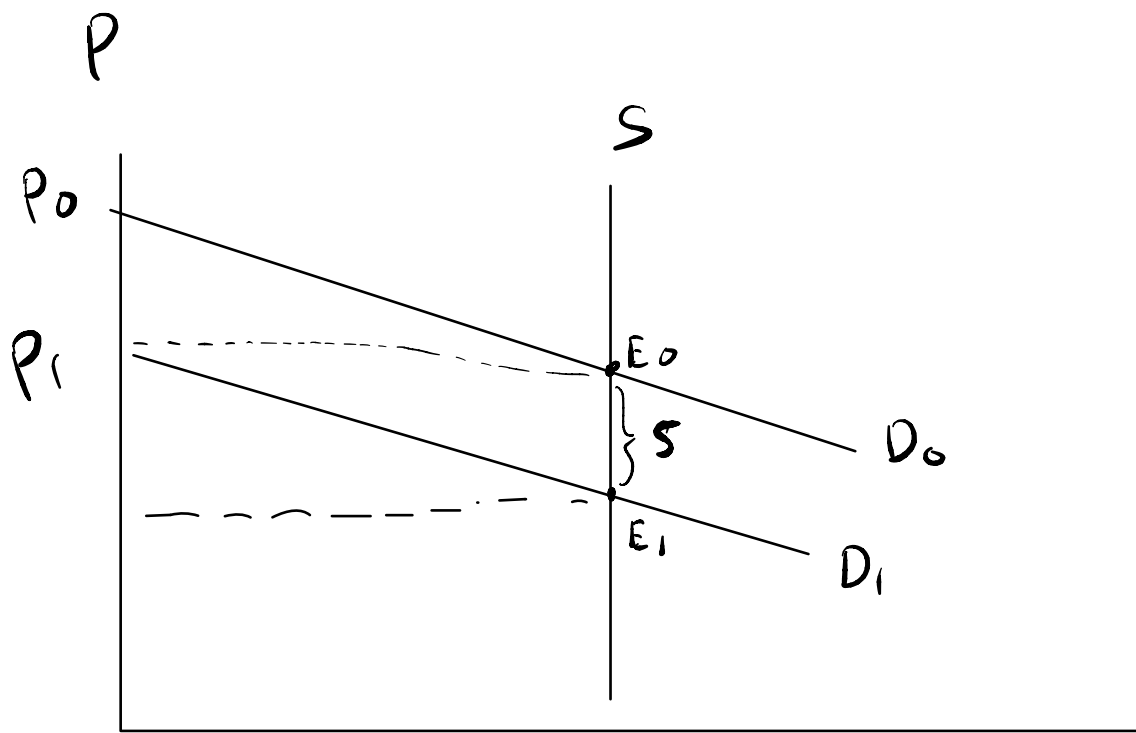
$$Q^D = 300 - P$$

- 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?

a) $Q_s = 38,000$



D_0 shift left to D_1 because they pay S more per ticket

Supply curve is inelastic because they reduced they lowered the price but keep it at the same quantity

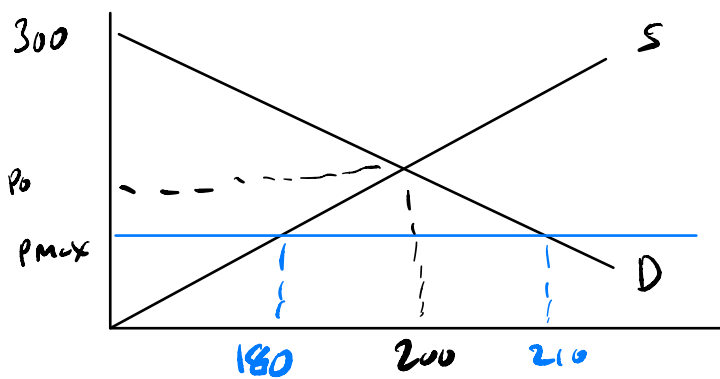
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a) $Q_S = 2P$ $P_0 = 100$

$$Q_D = 300 - P$$

$$2P = 300$$

$$P = 100$$



b) price ceiling of \$90 (P_{max})

$$Q_D = 300 - P$$

$$Q_S = 2(90)$$

$$Q_D = 300 - 90$$

$$= 180$$

$$Q_S = 210$$

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$$P_{\min} = 90 \quad \text{Equilibrium} = 100$$

$$P = 100$$

$$Q_s = 200$$

$$Q_d = 200$$

If we set floor price below the equilibrium,
then the market will continue its own
process. No Surplus or Shortage

D) government levies tax \$30

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

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

$$3p = 360$$

$$p = 120$$

$$Q_s = 2(120 - 30) \\ = 180$$

$$Q_s = Q_d = 180$$

No shortage or surplus