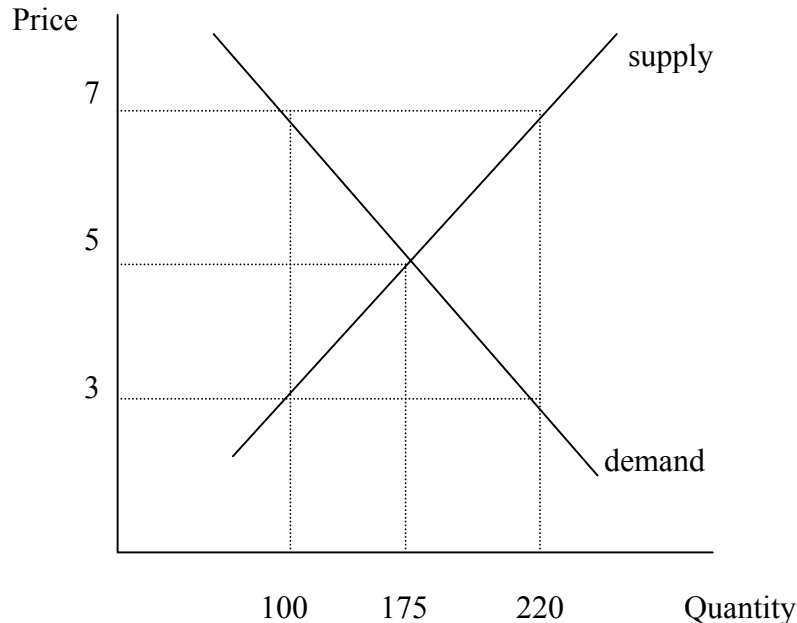


Chapter 3: Homework Assignment

1. Refer to the graph provided to answer the following questions.



- What are the equilibrium price and quantity in this market?
 - What is the effect of a price ceiling of \$3 placed on this market?
 - What is the effect of a price ceiling of \$7 placed on this market?
 - If price in this market is \$7, explain the adjustment process that will bring the market back to equilibrium.
2. Graph the effect on equilibrium price and quantity in the market for oranges for each of the following changes (graph each one separately).
- A chemical routinely sprayed on orange orchards is found to cause cancer.
 - The wages of farm workers increase.
 - A new orange picking machine is invented. For the same cost, it can pick more oranges, faster, and with less damage than other machines.
 - Consumer income falls.
 - The price of tangerines falls.
3. Graph the effect on equilibrium price and quantity in the orange market if both (a) and (b) from Question #2 occur simultaneously.

Key

1a. Equilibrium $P = \$5$ and equilibrium $Q = 175$.

1b. A shortage of 120.

1c. It will have no effect since equilibrium price ($\$5$) is below the ceiling of $\$7$.

1d. At $\$7$ there will be a surplus of 120. This signals firms to lower their price, until there is no more surplus (at equilibrium price of $\$5$).

2a. This will cause a decrease in the demand for oranges (preferences).

2b. This will cause a decrease in the supply of oranges (cost of inputs).

2c. This will cause an increase in the supply of oranges (technology).

2d. This will increase or decrease demand, depending on what type of good oranges are.

If they are normal, demand will decrease. If they are inferior, demand will increase (income).

2e. This will cause a decrease in the demand for oranges (substitutes).

3. The change in (a) will cause demand to decrease, the change in (b) will cause supply to decrease. The equilibrium quantity will decrease. Depending on the magnitude of the shifts, price may increase, decrease or remain the same.