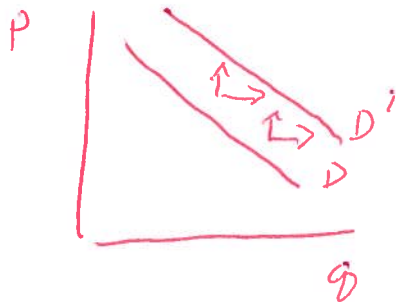


Problem Set #1.
 PAI 723
 Professor John McPeak
 Due _____

Name: KEY

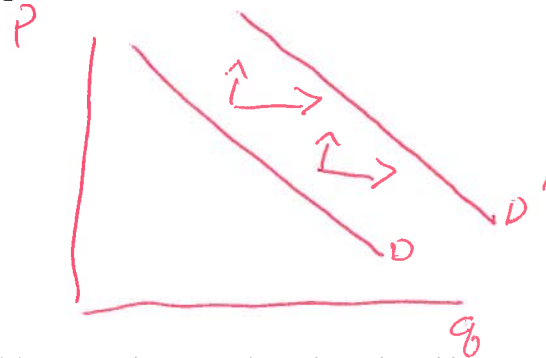
1) How would the following events influence this year's demand curve for New York State Fair general admission tickets compared to last year's demand curve? Draw a graph with price on the y axis and quantity on the x axis to illustrate your answer. Explain briefly your reasoning noting particular which element of the "all else held equal" condition has changed.

a. Economic growth in the CNY area over the past year has increased median income by 12%.



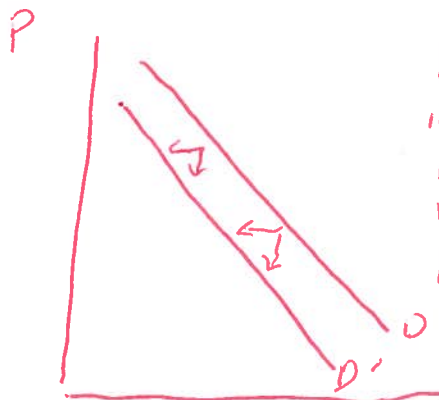
Income of consumers increases, leading to an outward shift in demand for NYS Fair tickets.

b. Last year, the Skaneateles fair was held at the same time, but had no general admission fee. This year it was also held at the same time, but charged \$5 for general admission.



Price of a substitute has increased leading to an outward shift in demand for NYS Fair tickets.

c. New security procedures introduced by recent legislation require that every individual entering the State Fair be thoroughly searched, and prohibit entering with backpacks, strollers, umbrellas, and more than 3 oz. of any liquid or gel.



Change in policy / information makes it less attractive to visit the fair if people view these restrictions as time consuming / restrictive a burden.

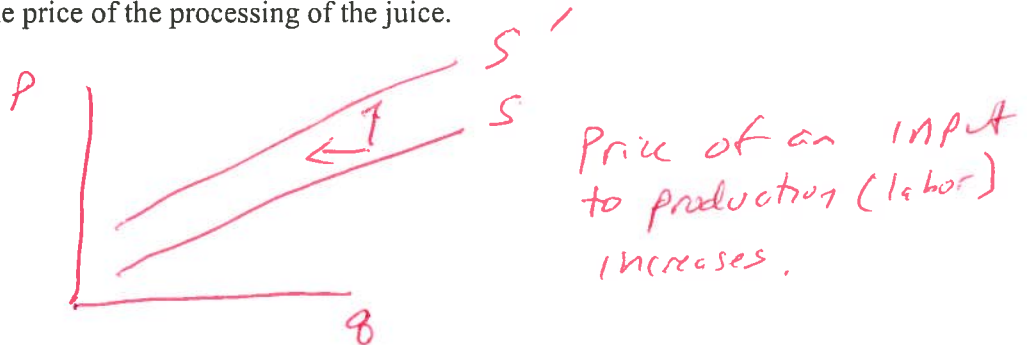
You could make the case for



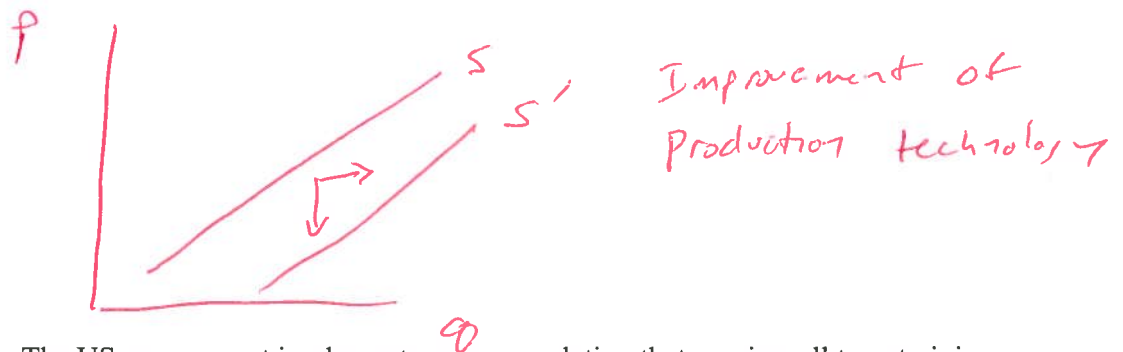
if you think people who are nervous about security at the NYS fair will now come due to the additional security.

2. How would the following events influence the supply curve for tomato juice? Draw a graph with price on the y axis and quantity on the x axis to illustrate your answer. Explain briefly your reasoning.

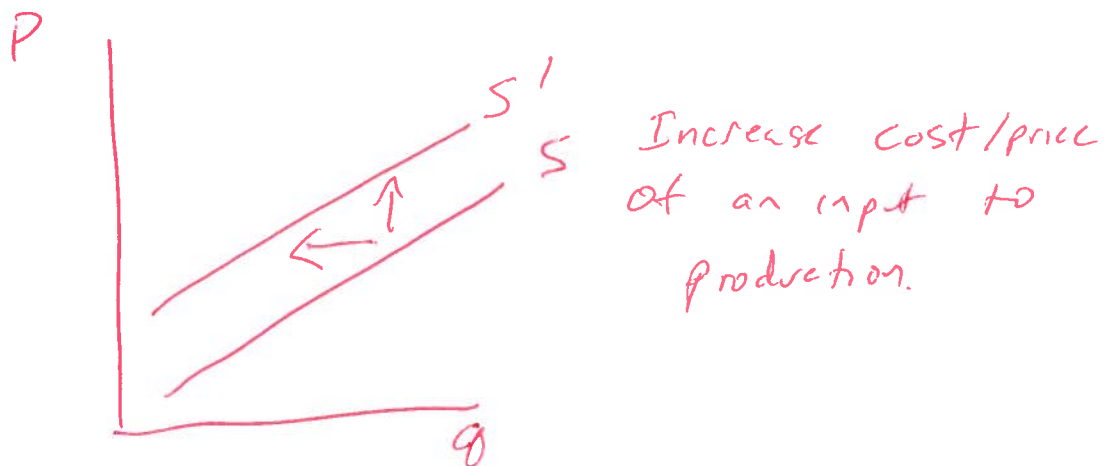
- a. The minimum wage for factory workers is increased by 14%, thereby increasing the price of the processing of the juice.



- b. An engineer at Syracuse University designs a new improved tomato juice press that increases the efficiency of tomato juice production by 6%.



- c. The US government implements a new regulation that requires all tomato juice sold in the US to have at least 50% content of domestic tomatoes, and domestic tomatoes cost more than the imported tomatoes that currently are 80% of juice content.



3. Supply and Demand mechanics.

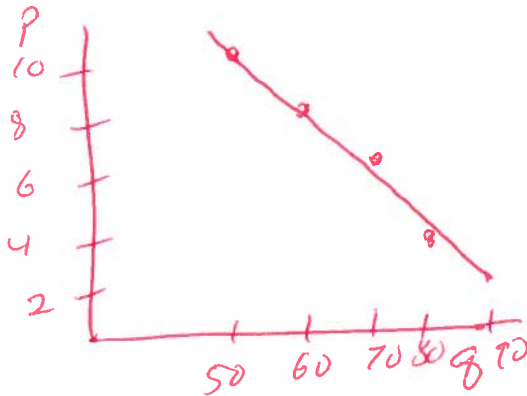
a. Quantity = $100 - 5 \cdot \text{price}$ is a supply curve or a demand curve? Why?

Demand. There is an inverse relationship between price and quantity

b. Fill in the following chart for the equation provided above.

Price	Quantity
2	90
4	80
6	70
8	60
10	50

c. Graph this information with price on the y axis and quantity on the x axis.

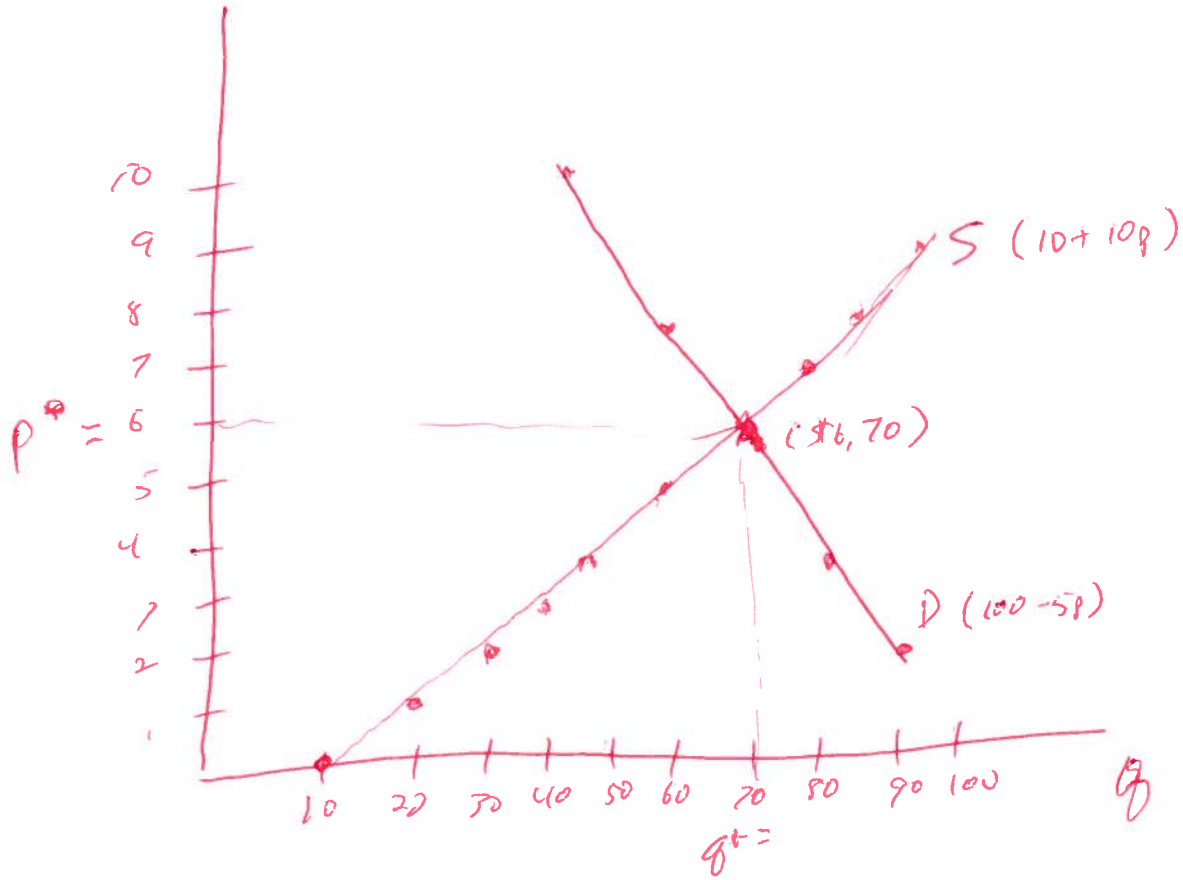


d. If in addition you know that Quantity = $10 + 10 \cdot \text{price}$, what is the equilibrium price? What is the equilibrium quantity?

$$\begin{array}{r}
 \text{D} \\
 100 - 5P = 10 + 10P \\
 \hline
 90 - 5P = 10P \\
 \quad +5P \quad +5P \\
 \hline
 \frac{1}{15}(90) = (15P) \frac{1}{15} \\
 \hline
 \frac{90}{15} = P \\
 P^* = 6
 \end{array}$$

$$\begin{array}{l}
 \text{S} \\
 Q = 100 - 5P \\
 Q = 10 + 10P \\
 P^* = 6 \quad 50 \\
 100 - 5(6) = 100 - 30 = 70 \\
 10 + 10(6) = 10 + 60 = 70 \\
 (P^*, Q^*) = (6, 70)
 \end{array}$$

e. Graph both these equations, clearly illustrating which is the supply curve, which is the demand curve, the equilibrium price and the equilibrium quantity.



4. You are given the following information on the demand curve for parking spaces on campus per hour during the working day. The quantity demanded is a function of the price of parking spaces on campus and the price of parking spots on private lots around campus. Statistical estimates suggest this relationship can be expressed as follows:

$$Q_d = 500 - 100 * P_{on} + 50 * P_{off}$$

where

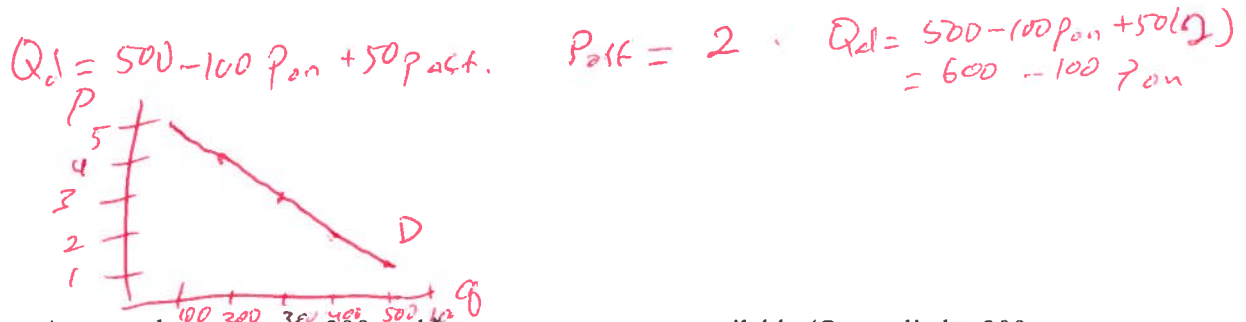
Q_d is the quantity of parking spaces demanded per hour in the working day

P_{on} is the price of parking on campus

P_{off} is the price of parking off campus on the private lots.

Assume the price of parking off campus is \$2 per hour.

- a. Draw the demand curve for parking on campus when P_{on} ranges from \$1 to \$5.



- b. Assume there are only 300 parking spots on campus available ($Q_{supplied} = 300$ for all possible prices). What is the equilibrium price?

$$600 - 100P = 300$$

$$300 = 100P$$

$$P^* = \$3.00$$

- c. What happens to this equilibrium price if the off campus private lots increase their charges to \$3 per hour and there is no change in the number of parking spaces on campus

$$Q_d (P_{off} = 3) = 500 - 100 P_{on} + 50(3)$$

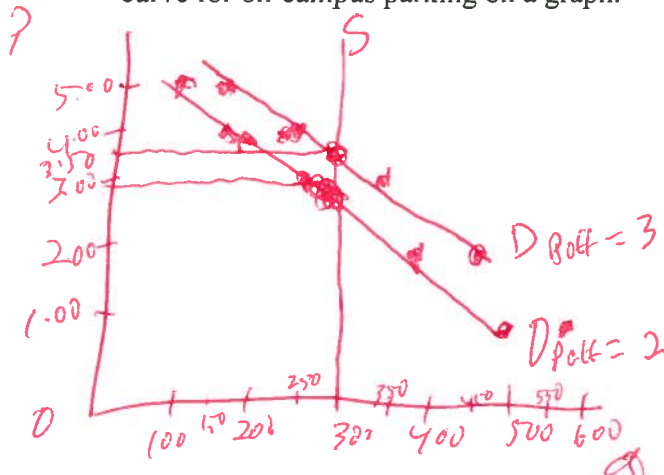
$$= 650 - 100 P_{on}$$

$$300 = 650 - 100 P_{on}$$

$$100 P_{on} = 350$$

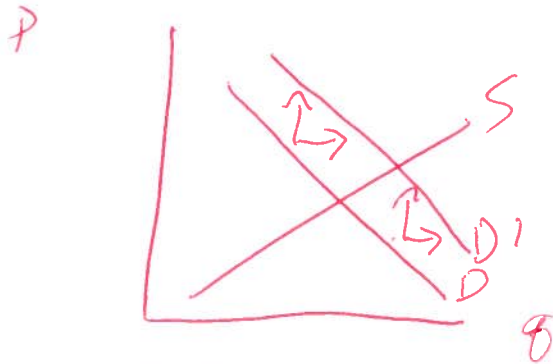
$$P_{on} = \$3.50$$

- d. Illustrate how the increase in off-campus parking rates influences the demand curve for on-campus parking on a graph.



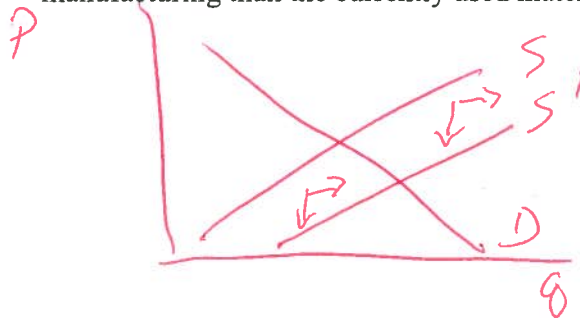
5) Tell me whether the following will lead to a movement along a demand curve or a shift in the demand curve for rakes in the city of Syracuse and illustrate.

- a. Syracuse passes a law saying homeowners will be fined \$0.05 per leaf left in their sidewalk for more than two days.



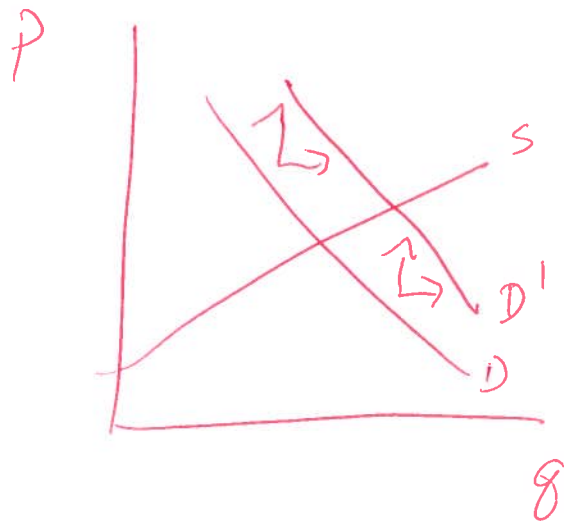
Increase in rules and regulation increases demand with a shift in demand.

- b. A new contract is signed between the Congolese government and the ^{rake}shovel manufacturers association of America that will regularize the supply of Kisanganimum, a metal that is less costly and more desirable in rake manufacturing than the currently used materials of steel and plastic.



Lower cost of an input used for production leads to a shift in supply so movement along a demand curve

- c. The cooperative extension releases a report suggesting that leaving fallen leaves on your lawn can lead to the growth of poisonous mushrooms.



Change in information leads to a shift in demand