Homework 4: Supply and Demand **Economics 304**

1) What is the simplifying assumption that we make to build a demand curve? How does this relate to a movement along the demand curve and a shift in demand?

only deals with P ? Q - everything else is held constant
this is movement along a curve.
Letting something else change (Eg. taste ? preference) shifts a curve

2) What happens when the price is below the equilibrium price? Why?

Competition from buyers bids the price up because there is a shortage

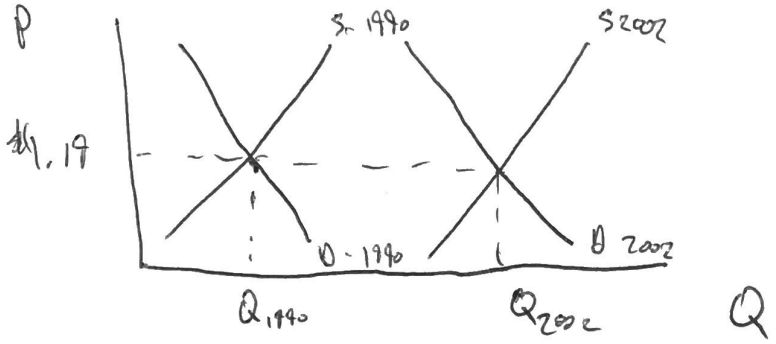
3) In your own words describe consumer and producer surplus.

The benefit the consumers (buyers) or producers (sellers) get from competition facilitating the market/ equilibrium price

4) Your roommate remarks that it is strange that a flight from New York to Chicago costs more than a flight from New York to Orlando, since New York is closer to Chicago than Orlando. What is your roommate assuming about the relationship between distance and price? How do you explain these prices?

It's distance that is impacted the price.
Could be relative demand in the areas.
New York to Chicago - business travel with few alternatives
New York to Orlando - vacation travel. Many alternative vacation destinations

5) In March 2002 the retail price of gasoline was $1.19 per gallon – exactly the same as it was in August 1990. Yet, total gasoline production and consumption rose. Use a well labeled supply and demand graph to explain how this could happen.



6) Consider the following elasticity problems

a. When bottlers increased the price of soda from vending machines by 10% sales dropped by 2.5%. Calculate the elasticity of demand.

$$\mathcal{E} = \frac{\%\Delta Q_d}{\%\Delta P} = \frac{2.5}{10}$$

b. Sal's boss has just told him that if he fails to increase the volume of his sales by 8%, he'll be fired. In order to meet his goal, sale is considering offering a discount (a sale) for the product he is selling. If the price elasticity of demand for his product is -2.66, how much should Sal lower the price to meet his goal?

$$-2.66 = \frac{0.08}{x}$$

c. Yogi eats a sizeable amount of pizza by the slice, and generally pays $5 from the food truck outside his office. A new vender just entered the neighborhood offering pizza for $3, and Yogi finds his monthly pizza expenditure rises. What can we say about Yogi's elasticity of pizza demand?

Total Expenditure = P · Q

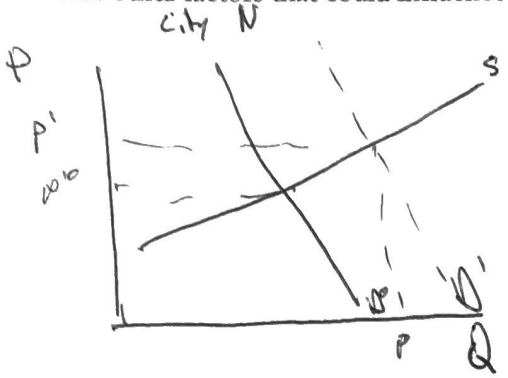
↓ ↑

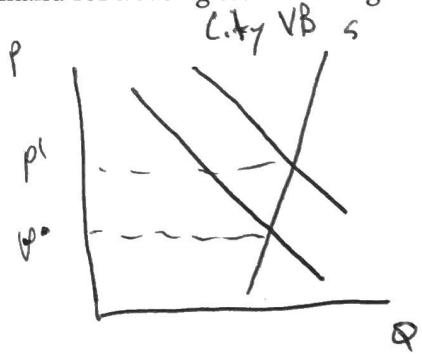
He is responding a lot to the price change, and consuming alot more pizza

Elastic demand

7) Consider the market for housing in two cities City *N* and City *VB*. In both cities population grew at the same rate. City *N*, however, experienced a relatively small increase in the equilibrium price with a relatively large change in the equilibrium quantity of housing. City *VB*, in contrast, experienced a relatively large increase in the price and little change in the quantity of housing. How can this be?

Draw the supply and demand diagrams for each city to explain and illustrate your answer. Assume that other factors that could influence supply and demand for housing did not change.





Elasticity of supply matters

8) For each of the following fictional scenarios use a supply and demand diagram to show both the original supply and demand curves and equilibrium price (P*) and quantity (Q*) as well as the impact of the scenario on equilibrium prices (P') and quantities (Q').

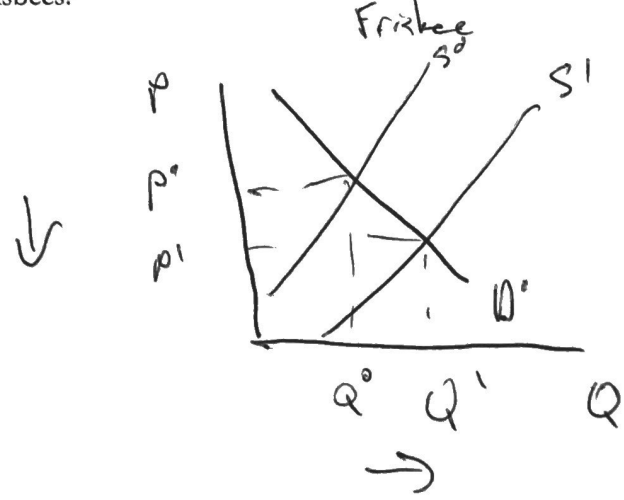
<u>Describe in words what caused the change (i.e. the supply or demand shifter) and its impact on equilibrium price and quantity.</u> Be sure to label the axis of your graphs.

a. How does the Washington Redskins football team's surprising 4 – 0 start to the NFL season and subsequent popularity effect the market for Redskins merchandise?

P↑ Q↑

taste ↑ preferences

b. What is the effect of a new technique for cheaply making plastics out of potatoes on the market for Frisbees?

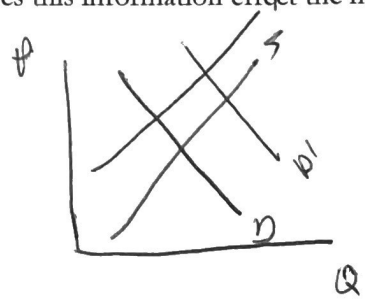


P↓ Q↑

technology ↑

input price reduction

c. Consumer reports recently rated Ford automobiles the safest cars on the road and at the same time the United Auto Workers labor union negotiated a contract that will double auto workers wages. How does this information effect the market for Ford automobiles?

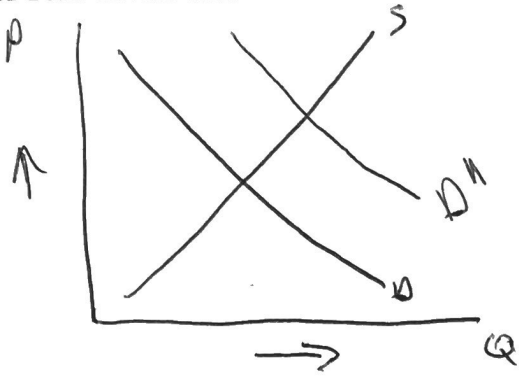


Q? P↑

Supply - shifted due to input costs

Demand - tastes ? preferences

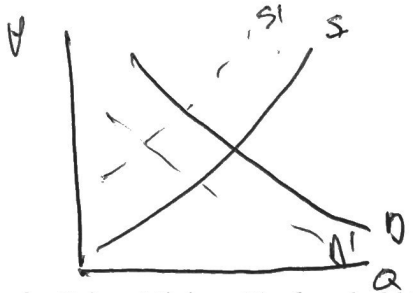
d. Dominion power announces that it will cut the price of electricity in half. How does this effect the market for Tesla electric cars?



P↑ Q↓

price of a related good (a complement) decreased shifts demand out.

e. Recently an outbreak of listeria, a bacterium that can cause serious illness and even death, was found to come from infected cantaloupes. What is the effect on the market for cantaloupes?



shifts supply ? demand

↳ reduces # of sellers

↳ tastes ? preferences

Q↓ P?