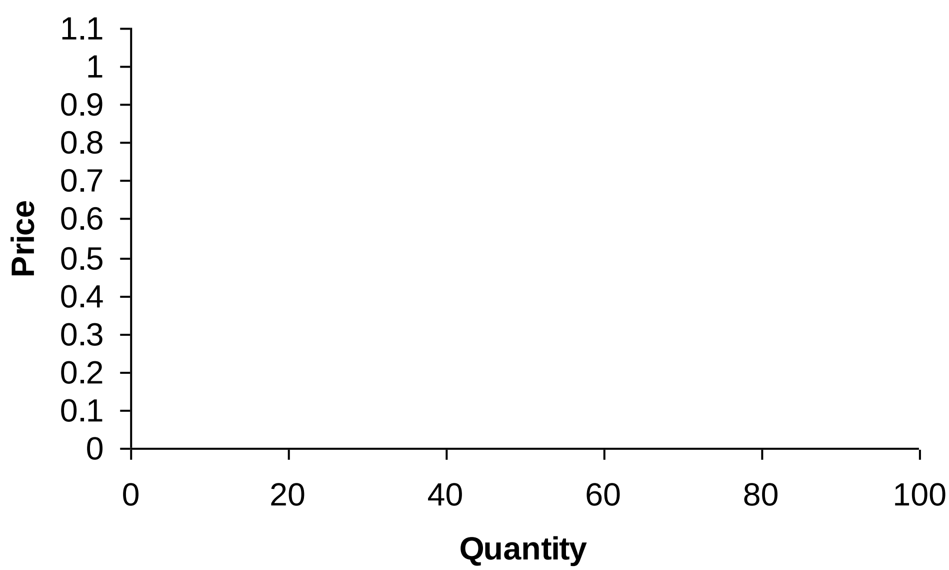
1. The table below shows demand data for fountain soft drinks. Columns 4 and 5 show the average percent change in price and quantity between each of the points on the demand curve (as well as the computation necessary to determine these percent changes).

1	**2**	**3**	**4**	**5**	**6**	**7**
Price	**Quantity Demanded**	**Total Revenue**	**Average Percent Change in Quantity (absolute value)**	**Average Percent Change in Price (absolute value)**	**Elasticity**	**Character of Demand (i.e., inelastic or elastic)**
.80	0		*********	*********	*******	********
.70	20		(20/10)*100 = 200%	(.10/.75) *100 = 13.33%		
.60	40		(20/30)*100 = 66.67%	(.10/.65) *100 = 15.38%		
.50	60		(20/50)*100 = 40%	(.10/.55) *100=18.18%		
.40	80		(20/70)*100 = 28.57%	(.10/.45) *100 = 22.22%		
.30	100		(20/90)*100 = 22.22%	(.10/.35) *100 = 28.57%		

a. Graph the demand curve in figure 1.

Figure 1



b. Using the demand data provided, complete column 3 of the table by computing total revenue. At what price is total revenue the highest? __________

c. Complete column 6 by computing the elasticity of demand between each of the six prices (e.g., between .30 and .40, between .40 and .50, etc). In column 7, indicate whether demand is elastic or inelastic.

d. Suppose you are a consultant for the supplier of this good and she is currently charging a price of $.70. If she tells you her goal is to maximize total revenue, what advice would you give her and why?

e. How would your advice change if she were charging a price of $.40?

f. Label the elastic and inelastic regions of the demand curve in Figure 1.

g. Based on the information in this problem, we can predict that total revenues will rise when price rises <u>and</u> demand is (circle one) **elastic, inelastic**. Total revenues will also rise when price falls <u>and</u> demand is (circle one) **elastic, inelastic**.

h. In your own words, what is the relationship between price elasticity of demand and total revenue?

2. Suppose the demand and supply of MSU sweatshirts is given by:

Quantity Supplied per year	Price	Quantity Demanded per year
0	0	4800
400	10	4000
800	20	3200
1200	30	2400
1600	40	1600
2000	50	800
2400	60	0

a. Graph these curves in Figure 1.

Figure 1

b. At what price does equilibrium occur? ________ What quantity is traded at that price?_____________.

c. At equilibrium, what is the dollar amount of consumer surplus? _____________. Label this area in the graph above.

d. At equilibrium, what is the dollar amount of producer surplus? _____________. Label this area in the graph above.

e. At equilibrium, what is the dollar amount of the gains from trade? _____________.

f. Suppose that because of a government anti-sweatshirt regulation, the maximum quantity of this good that could be produced was 800. What is the new price that will prevail for the good? __________

g. What is the dollar amount of consumer surplus at the new price? ________

h. What is the dollar amount of producer surplus at the new price? _________

i. What is the dollar amount of the gains from trade at the new price? ____________

j. Why is there a difference between the gains from trade in part e and part i?

Homework 3 - Multiple Choice

1. The responsiveness of quantity demanded to price changes is known as the
   a. consumer sensitivity index
   b. producer responsiveness index
   c. demand coefficient
   d. elasticity of demand
   e. none of the above

2. If the price of a good falls and as a result producers' incomes decrease, the demand for the good must be
   a. relatively elastic
   b. relatively inelastic
   c. perfectly elastic
   d. perfectly inelastic

3. The demand for a product will be relatively inelastic if
   a. there are no close-substitute products available
   b. spending on the product constitutes a large portion of consumer income
   c. the product is considered to be a luxury
   d. the consumer has considerable time to adjust to price changes

4. Many people consider Alaskan cruises to be luxury goods. Therefore, the price elasticity of demand for Alaskan cruises is most likely to be which of the following numbers?
   a. -2.2
   b. -1.0
   c. -0.5
   d. 0

5. If the college athletic department lowers the price of football tickets from $8 to $6 and as a result the revenue earned from football ticket sales rises, we could reasonably conclude that the demand for football tickets
   a. Does not obey the law of demand
   b. Has increased
   c. Is inelastic
   d. Is elastic
   e. Has decreased

6. A change in consumer preferences has increased the demand for coffee. At the same time, coffee growers have banded together to restrict the output of coffee. What can we say about the equilibrium price and quantity in the coffee market as a result of these two changes?
   a. price will rise and quantity will fall
   b. price will fall, but the effect on equilibrium quantity is unknown
   c. price will fall and quantity will fall
   d. price will rise, but the effect on equilibrium quantity is unknown
   e. the affect on both equilibrium price and equilibrium quantity is unknown

7. The elasticity of demand for milk is -0.5. Currently, the government supports a price floor that keeps the price of milk 20% above the equilibrium price. If the price floor is removed, how much more milk will people purchase?

a. 40%
b. 30%
c. 20%
d. 10%
e. not enough information to answer this question

8. When supply increases, price will decrease by a greater amount.

a. The more elastic is demand
b. The more inelastic is demand
c. The flatter is the supply curve
d. The flatter is the demand curve

9. Consumer surplus is defined as

a. the benefit to a firm when a consumer buys a good or service
b. the value you get that is in excess of what you pay to get a good or service
c. the money that firms get, which is in excess of the marginal costs of producing the good
d. the difference between the price the consumer pays and the price a producer gets for producing a good.

10. Which of the following events is most likely to increase the elasticity of demand for a good

a. A decrease in the demand for the good
b. A decrease in the price of the good
c. An increase in the demand for the good
d. Higher incomes of consumers of the good
e. A longer time period during which consumers can adjust to price changes