Homework 1

The due date to be submitted is **October 27th** at the beginning of the class. I prefer hard copies (written or printed – up to you). In exceptional cases, you can also submit electronically via homework vaults folder. Copying from each other is not welcome – better submit as a joint work.

1. If textbooks and study guides are complements, then an increase in the price of textbooks will result in
   a. more textbooks being sold.
   b. more study guides being sold.
   c. fewer study guides being sold.
   d. no difference in the quantity sold of either good.

2. The incidence of an excise tax
   a. refers to who really pays it
   b. always falls on suppliers
   c. is equally divided between demanders and suppliers
   d. is determined by the number of demanders
   e. is decided by the government when the tax is imposed

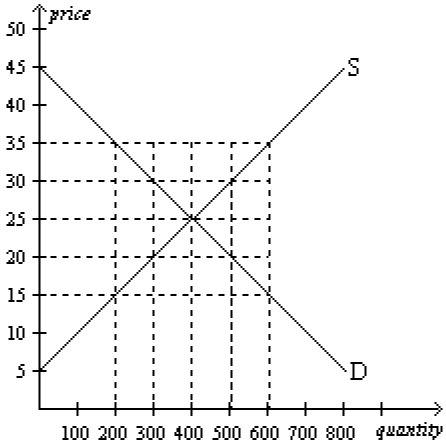
3. Which of the following events must cause equilibrium quantity to fall?
   a. demand increases and supply decreases
   b. demand and supply both decrease
   c. demand decreases and supply increases
   d. demand and supply both increase

4. To say that a price ceiling is binding is to say that the price ceiling
   a. results in a surplus.
   b. is set above the equilibrium price.
   c. causes quantity demanded to exceed quantity supplied.
   d. All of the above are correct.

5. TRUE/FALSE Both a price floor and a price ceiling will reduce that amount of a good that is traded in the market.

6. If the price elasticity of demand for a good is 5.0, then a 10 percent increase in price results in a
   a. 0.5 percent decrease in the quantity demanded.
   b. 2.5 percent decrease in the quantity demanded.
   c. 5 percent decrease in the quantity demanded.
   d. 50 percent decrease in the quantity demanded.

7. In the following figure at a price of $35, there would be a

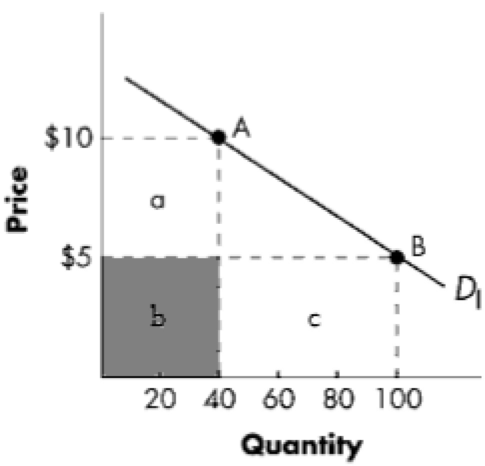


a. shortage of 400 units.
b. surplus of 200 units.
c. surplus of 400 units.
d. surplus of 600 units.

8. If the demand for movies increases at the same time as the movie industry adopts labor-saving technology for producing movies, the equilibrium price for movies will increase, but the effect on the equilibrium quantity of movies is ambiguous.
a. True
b. False

9. An increase in the price of cotton will increase the equilibrium price and decrease the equilibrium quantity in the market for cotton t-shirts.
a. True
b. False

10.



i) With reference to the graph above, at a price of $10, what total revenue equals to?

ii) Graph A represents a demand curve that is relatively ____in the range illustrated. Total revenue ____ as the price decreases from $10 to $5.

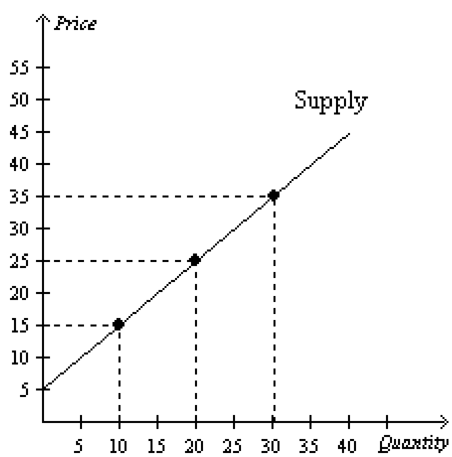
a. inelastic; decreases
b. elastic; decreases
c. elastic; increases
d. inelastic; increases

11. Desmond demands jazz CDs according to the following demand schedule:

Price of Jazz CDs	**Quantity of Jazz CDs**
$30	1
$25	2
$20	3
$15	4
$10	5

i) If the price of the jazz CDs equals $15, what is the total consumer surplus Desmond receives from purchasing jazz CDs?
ii) If in the schedule, total consumer surplus equals $5, what the market price of a jazz CD is?

12. Using the midpoint method, what is the price elasticity of supply between $15 and $25?



13. Suppose demand is given by the equation:
$Q^D = 50 - 5P$

Plot the demand curve and using the midpoint method calculate the price elasticity of demand between $1 and $2?

14. Consider the following demand schedule.

Price	Quantity Demanded
$0	1,000
$3	800
$6	600
$9	400
$12	200
$15	0

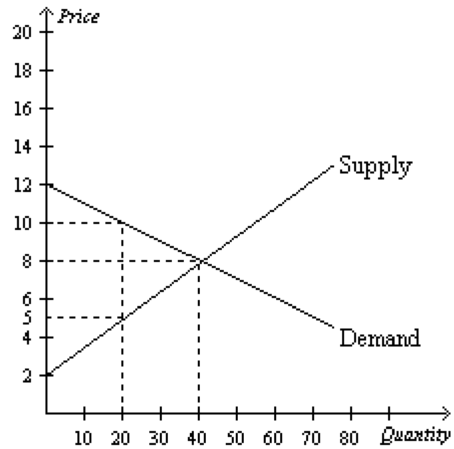
Using the midpoint method, demand is unit elastic when price changes from

15. Which of the following statements is true:

a. A tax of $1 on sellers always increases the equilibrium price by $1.
b. A tax on buyers shifts the demand curve and the supply curve
c. A tax on buyers decreases the quantity of the good sold in the market.
d. The tax incidence depends on whether the tax is levied on buyers or sellers.

16. Answer the following questions based on the graph that represents Alena's demand for ribs per week at Judy's Rib Shack.

a. At the equilibrium price, how many ribs would Alena be willing to purchase?
b. How much is Alena's willing to pay for 20 ribs?
c. What is the magnitude of Alena's consumer surplus at the equilibrium price?
d. At the equilibrium price, how many ribs would Judy be willing to sell?
e. How high must the price of ribs be for Judy to supply 20 ribs to the market?
f. At the equilibrium price, what is the magnitude of total surplus in the market?
g. If the price of ribs rose to $10, what would happen to Alena's consumer surplus?
h. If the price of ribs fell to $5, what would happen to Judy's producer surplus?
i. Explain why the graph that is shown verifies the fact that the market equilibrium (quantity) maximizes the sum of producer and consumer surplus.
j. Now imagine government intervenes and sets price ceiling on ribs at 5 dollars, by how much the total surplus will change in the short run?
k. Now imagine government intervenes and sets price floor on ribs at 5 dollars, by how much the total surplus will change in the short run?



17) problem from last year midterm exam

The demand and supply for soft drinks are given by Q = 15 – $\frac{P}{2}$ and Q = P-3, respectively.

1. Plot the inverse demand and supply curves
2. Solve for the equilibrium price and quantity
3. Suppose now the government imposes a per-unit tax of $3 on the sellers. How many units of soft drinks will be sold on the market after tax? (*hint: use similar triangle method*)
4. What will be the government revenue?
5. Calculate what is the price paid by the buyers p^b and price received by the sellers p^s after the tax is imposed? (*hint: use demand and supply functions above*)
6. How much will the total surplus be after the taxation?
7. What fraction of the economic incidence of the tax is borne by consumers?
8. How would the tax incidence be different if it was imposed on consumers instead?
9. Is price elasticity of supply higher or price elasticity of demand?
10. What is the price *elasticity of demand* when moving from the equilibrium quantity to the quantity after taxation?
11. Now imagine that instead of imposing a tax the government decided to educate people about the health risks of the soft drinks, how would equilibrium quantity and price change qualitatively?
12. What kind of policy would cause similar type of distortion (in terms of lost surplus/welfare) in the market instead of the 3$ per-unit tax?