

Quiz #1 Answers
APEC 3001
Applied Microeconomics:
Consumers, Producers, and Markets
(Summer 2007)
Instructor: Hurley

Name:

Please show all the work you do to solve a problem.

1. What are the two fundamental assumptions of microeconomics? **(1.5 Points)**

Answer: #1: Nonsatiation = People have unlimited wants.
#2: Scarcity = People have limited means.

2. What is the difference between the legal and economic incidence of a tax? **(1.5 Points)**

Answer: The legal incidence of a tax falls upon people with the statutory responsibility for paying the tax: the people who write the check for the tax. The economic incidence of a tax falls upon the people who actually pay the tax. Specifically, it represents the difference in the pre and post tax price paid by a buyer or received by a seller.

3. Which of the following statements is true? (2.5 Points)
- a. When making a decision, it is important to include both opportunity and sunk costs.
 - b. When making a decision, it is important to ignore both opportunity and sunk costs.
 - c. When making a decision, it is important to include sunk costs and ignore opportunity costs.
 - d. When making a decision, it is important to include opportunity costs and ignore sunk costs.

Answer: d. Opportunity costs are the costs of engaging in one activity instead of another, while sunk costs are costs incurred regardless of which activity you choose. When making decisions it is absolutely important to consider what you will be giving up—the opportunity cost. If some costs are the same regardless of what you do — sunk costs, these costs are irrelevant.

4. Suppose the supply of I-Pods is $Q_S = 10P$, while the demand is $Q_D = 3,000 - 5P$. Which of following the statements is true? (2.5 Points)
- a. If the market price of an I-Pod is \$200, there will be a surplus of I-Pods.
 - b. If the market price of an I-Pod is \$200, there will be a shortage of I-Pods.
 - c. If the market price of an I-Pod is \$220, there will be a surplus of I-Pods.
 - d. If the market price of an I-Pod is \$220, there will be a shortage of I-Pods.

Answer: c. The fastest way to solve this problem is to find the equilibrium price: $Q_S = Q_D = Q^* \Rightarrow 10P^* = 3,000 - 5P^* \Rightarrow 15P^* = 3,000 \Rightarrow P^* = 200$. Since market equilibrium price implies there is no surplus or shortage, answer a. and b. are out. Since \$220 is above the equilibrium price, sellers will want to sell more than buyers want to buy. That is, there will be excess supply or a surplus.

5. The figure below illustrates the demand, Q_D , and supply, Q_S , of sport utility vehicles (SUVs). **(8 points)**
- Illustrate the equilibrium market price and quantity. Label the equilibrium price P^0 and the equilibrium quantity Q^0 .
 - Illustrate the consumer, producer, and total surplus for this market equilibrium.
 - Suppose General Motors and Ford convince the government to pass legislation to put a floor on SUV prices (label it P^F) above the equilibrium price because SUV demand is lower than in the past due to high gas prices. Show how this floor will affect the quantity of SUVs demanded (label it Q_D^F) and the quantity supplied (label it Q_S^F). Will this price floor result in a shortage or surplus of SUVs? How many SUVs will be sold?
 - How will this price floor affect consumer surplus? How will it affect producer surplus? How will it affect total surplus? What do these results imply in terms of the efficiency of the government's price floor?

Answer:

- See Figure below.
- Consumer surplus is area **acf** on the figure below. Producer surplus is area **cef**. Total surplus is area **ace**.
- See below. The price floor will result in a surplus where only Q_D^F SUVs are sold.
- Consumer surplus will fall by area **bcfg** on the figure below. Producer surplus increase by area **bhfg**, but fall by area **cdh**. Total surplus will fall by area **bcd**. Since the total surplus has fallen, the government's price floor is inefficient.

