

Prices, Demand, Production and Supply

Multiple Choice (MC) questions usually have only one correct answer, although you may be able to defend different answers. Other kinds of questions often have more than one correct answer. Having good reasons for your answers is more important than what your answer is. If you don't understand the meaning of a question, you may write to your own TF, but do not expect him/her to give you answers. The problem set will not be graded, but the way you discuss the problems in your discussion section will affect your discussion-section participation score. You are allowed to work on the problem sets with other students.

1. You buy an expensive gym membership, but never go to the gym because it is always more tempting to stay home. However, you feel bad that you cannot get yourself to go to the gym. Was your decision to buy the membership voluntary? Was it rational?
2. *True or False: Explain Why.*
 - i. Most markets are perfectly competitive
 - ii. If the market for bananas is perfectly competitive, identical bananas must be sold at the same price everywhere in the market
 - iii. People who conduct arbitrage typically buy high and sell low to make a profit
3. Explain whether in the following examples, the law of one price should apply. If it does not apply, explain why it does not.
 - i. A McDonalds burger in the airport versus a McDonalds burger in Commonwealth Avenue.
 - ii. A taco in Massachusetts versus a taco in California
 - iii. An orange at “fancy” Wholefoods versus an orange at “mundane” Star Market.
 - iv. An iPhone X in the Apple store at BU West Campus vs the same iPhone at the Apple store at BU East Campus.
4. Many Canadians cross the border to the U.S. to do their shopping, because prices are cheaper in the U.S. Is this an example of arbitrage? Suppose they go back to Canada and sell what they bought in the U.S. Is that arbitrage? *Why or why not?*
5. Which market do you believe more closely resembles perfect competition, the market for smartphones or the market for black beans? *Explain.*
6. Suppose you want to draw Ben's demand curve for iPhones. Which of the following questions would you ask him?
 - a. How many iPhones will you buy this year?
 - b. What do you think the price of iPhones will be tomorrow?
 - c. At a price of \$1100, how many iPhones would you buy?
 - d. If you buy 2 iPhones, what would the price of each iPhone be?
7. The supply and demand model applies when three of the following four conditions are met. Which condition is **not** required? *Why not?*
 - a. The item traded must be a physical good and not a service.
 - b. There must be many buyers.
 - c. There must be many sellers.
 - d. All buyers and sellers must trade an identical item.

QUESTIONS 8-13 ARE BASED ON THE FOLLOWING SCENARIO: Liqun's lunch and Qingyan's lunch are identical. Suppose Matteo is going to pay Liqun \$10 for his lunch. Qingyan is going to sell her lunch to Hong for \$18. Laurie is an arbitrageur, and she sees an opportunity. Answer the following questions.

8. Who are the "losers" if these trades go through without Laurie doing anything?
 - a. Liqun and Qingyan
 - b. Liqun and Hong
 - c. Matteo and Qingyan
 9. How can Laurie make money by arbitrage?
 - a. Buy lunch from Matteo and sell to Hong
 - b. Buy lunch from Liqun and sell to Qingyan
 - c. Buy lunch from Liqun and sell to Hong
 10. Based on your answer, how much will Laurie have to offer when she buys lunch if she wants to make money? Let B be the buying price.
 - a. $B > \$10$
 - b. $B < \$10$
 - c. $\$10 < B < \18
 11. How much could Laurie charge when she sells this lunch if she wants to make money? Let S be Laurie's selling price.
 - a. $S > \$18$
 - b. $S < \$18$
 - c. $B < S < \$18$
 12. How much money does Laurie make?
 - a. $S - B$
 - b. $B + S$
 - c. $\$18 - B$
 13. If the Economics department is filled with arbitrageurs like Laurie, what can you say about the prices of identical lunches in the department?
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14. Which of the following explains why an individual's demand curve for beer might be downward sloping? *Explain*
 - a. At lower prices you may want to go out for a beer every day.
 - b. At lower prices you feel comfortable buying beer for your friends.
 - c. At lower prices it is easier to produce beer.
 - d. *Both* a. and b.
 15. Give three examples of important advances in technology that changed productivity.
 16. Did the advances you listed in the previous question have negative effects on workers or businesses? Explain.

17. How would the supply of new houses be affected in the following situations?

- i. The price of land increases.
- ii. The price of cement decreases.
- iii. There is a major advance in construction technology.