

# ECON 201 Microeconomics

## Homework 1

### Chapter 1

1. In each of the following situations, identify which of the twelve principles is at work.
  - a. You choose to shop at the local discount store rather than paying a higher price for the same merchandise at the local department store.
  - b. On your spring break trip, your budget is limited to \$35 a day.
  - c. The student union provides a website on which departing students can sell items such as used books, appliances, and furniture rather than giving them away to their roommates as they formerly did.
  - d. After a hurricane did extensive damage to homes on the island of St. Crispin, homeowners wanted to purchase many more building materials and hire many more workers than were available on the island. As a result, prices for goods and services rose dramatically across the board.
  - e. You buy a used textbook from your roommate. Your roommate uses the money to buy songs from iTunes.
  - f. You decide how many cups of coffee to have when studying the night before an exam by considering how much more work you can do by having another cup versus how jittery it will make you feel.
  - g. There is limited lab space available to do the project required in Chemistry 101. The lab supervisor assigns lab time to each student based on when that student is able to come.
  - h. You realize that you can graduate a semester early by forgoing a semester of study abroad.
  - i. At the student union, there is a bulletin board on which people advertise used items for sale, such as bicycles. Once you have adjusted for differences in quality, all the bikes sell for about the same price.
  - j. You are better at performing lab experiments, and your lab partner is better at writing lab reports. So the two of you agree that you will do all the experiments, and she will write up all the reports.
  - k. State governments mandate that it is illegal to drive without passing a driving exam.
  - l. Your parents' after-tax income has increased because of a tax cut passed by Congress. They therefore increase your allowance, which you spend on a spring break vacation.

8. Which of the following situations describes an equilibrium? Which does not? If the situation does not describe an equilibrium, what would an equilibrium look like?
- a. Many people regularly commute from the suburbs to downtown Pleasantville. Due to traffic congestion, the trip takes 30 minutes when you travel by highway but only 15 minutes when you go by side streets.
  - b. At the intersection of Main and Broadway are two gas stations. One station charges \$3.00 per gallon for regular gas and the other charges \$2.85 per gallon. Customers can get service immediately at the first station but must wait in a long line at the second.
  - c. Every student enrolled in Economics 101 must also attend a weekly tutorial. This year there are two sections offered: section A and section B, which meet at the same time in adjoining classrooms and are taught by equally competent instructors. Section A is overcrowded, with people sitting on the floor and often unable to see what is written on the board at the front of the room. Section B has many empty seats.

## Chapter 2

3. In the ancient country of Roma, only two goods, spaghetti and meatballs, are produced. There are two tribes in Roma, the Tivoli and the Frivoli. By themselves, the Tivoli each month can produce either 30 pounds of spaghetti and no meatballs, or 50 pounds of meatballs and no spaghetti, or any combination in between. The Frivoli, by themselves, each month can produce 40 pounds of spaghetti and no meatballs, or 30 pounds of meatballs and no spaghetti, or any combination in between.
- a. Assume that all production possibility frontiers are straight lines. Draw one diagram showing the monthly production possibility frontier for the Tivoli and another showing the monthly production possibility frontier for the Frivoli. Show how you calculated them.
  - b. Which tribe has the comparative advantage in spaghetti production? In meatball production?

In A.D. 100 the Frivoli discover a new technique for making meatballs that doubles the quantity of meatballs they can produce each month.

- c. Draw the new monthly production possibility frontier for the Frivoli.
- d. After the innovation, which tribe now has an absolute advantage in producing meatballs? In producing spaghetti? Which has the comparative advantage in meatball production? In spaghetti production?

## Chapter 3

2. In a supply and demand diagram, draw the shift of the demand curve for hamburgers in your hometown due to the following events. In each case, show the effect on equilibrium price and quantity.
- a. The price of tacos increases.
  - b. All hamburger sellers raise the price of their french fries.
  - c. Income falls in town. Assume that hamburgers are a normal good for most people.
  - d. Income falls in town. Assume that hamburgers are an inferior good for most people.
  - e. Hot dog stands cut the price of hot dogs.

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Due Sunday Jan 17 2015