

Homework #1

1. Comparative Advantage

In each of the cases below, who has the absolute advantage at each task, and who has the comparative advantage?

- (a) In 30 minutes, Kana can either make miso soup or she can clean the kitchen. In 15 minutes, Mitchell can make miso soup; it takes Mitchell an hour to clean the kitchen.
- (b) In one hour, Ethan can bake 20 cookies or lay the drywall for two rooms. In one hour, Sienna can bake 100 cookies or lay the drywall for three rooms.
- (c) Kara can build two glass sculptures per day or she can design two full-page newspaper advertisements per day. Sara can build one glass sculpture per day or design four full-page newspaper ads per day.
- (d) Data can write 12 excellent poems per day or solve 100 difficult physics problems per day. Riker can write one excellent poem per day or solve 0.5 difficult physics problems per day.

2. Comparative Advantage, cont.

Suppose the table below shows the number of labor hours needed to produce one airplane and one automobile in the United States and South Korea

Country	Labor Hours - 1 Airplane	Labor Hours - 1 Auto
South Korea	2,000	?
United States	800	5

Without knowing the number of labor hours required to produce an auto in South Korea, you cannot figure out which country has the comparative advantage in which good.

- (a) Give an example of a number for the empty cell of the table that would give the United States the comparative advantage in the production of airplanes? What about a number that would give South Korea comparative advantage in airplanes?
- (b) Who has the absolute advantage in the production of airplanes? What about autos?
- (c) What exact number would you have to place in the empty cell of the table for it to be impossible that trade between the United States and South Korea could benefit both nations?

3. Supply and Demand

- (a) If the price of glass dramatically increases, what are we likely to see a lot less of: glass windows or glass bottles? Why?
- (b) Assume that butter and margarine are substitutes. What will happen to the demand curve for butter if the price of margarine increases? Why?
- (c) Cars and gasoline are complements. What will happen to the demand curve for gasoline if the price of cars decreases? Why?
- (d) Michael is an economist. He loves being an economist so much that he would do it for a living even if he only earned \$30,000 per year. Instead, he earns \$87,000 per year (Note: this is the average salary of a new economist with a Ph.D.). How much producer surplus does Michael enjoy?
- (e) If a snowstorm was forecast for the next day, what would happen to the demand for snow shovels? Is this a change in quantity demanded or a change in demand? This shift in the demand curve would affect the price; would this cause a change in quantity supplied or a change in supply?

4. Price Ceilings and Floors

- (a) In rich countries, governments almost always set the fares for taxi rides. The prices for taxi rides are the same in safe neighborhoods and in dangerous neighborhoods. Where is it easier to find a cab? Why? If taxi price controls were ended, what would probably happen to the price and quantity of cab rides in dangerous neighborhoods?
- (b) Knowing what you know now about price controls, are you in favor of setting a \$2 per gallon price ceiling on gasoline? Create both a pro-price control and anti-price control answer.