

## Practice Problems 1 : Supply and Demand Practice

Modified: Spring 2012

Each answer should have a well labeled supply and demand diagram as well as any other information needed for the problem. Generally, start in equilibrium and then show the new equilibrium and show what happens to price and quantity in the market .

1. Suppose new computer companies move into Hamden and provide high paying jobs to all the residents. What happens in the local car market?
2. Suppose new high-wage industries move into an area where car makers also employ people (e.g., Detroit). Due to this new competition car makers are forced to offer their workers higher wages as well. What happens in the car market?
3. Consider now numbers (1) and (2) together. That is, high-wage industries move into area and push up wages. Overall incomes increase and wages in the area rise.
  - a. What happens in the market of any good produced and sold locally?
  - b. What happens in the market for goods sold locally, but produced elsewhere?
4. Consider the market for music. What happens when there is a technological innovation (we'll call it an MP3) that makes producing and distributing music much, much cheaper?
5. As the price of iPads fall, what should be happening to the market for apps?
6. As the price of iPads fall, what should be happening to the market for laptops?
7. Incomes in China and India are increasing.
  - a. Analyze the effects in the world market for oil.
  - b. Given your answer in (a), analyze the gasoline market.
  - c. Given your answer in (b), analyze the market for SUV's
  - d. Given (b) and (c), analyze the market for smaller fuel efficient cars.
  - e. Given (a) and (b), analyze the market for air flights.
8. Since 9/11 there has been a constant effort to increase security at airports.
  - a. How might this affect the supply side of the market for air flights.
  - b. How might this affect the demand side of that market?
  - c. Analyze the market for air flights.
9. As the price of oil rises, there has been an increase in demand for alternative fuels. Ethanol is one such alternative fuel. Ethanol can be produced from corn.
  - a. Explain why, using factors of demand and analysis of the market for alternative fuels (including ethanol).
  - b. Analyze the effects in the corn market.
  - c. Given (b) analyze the effects in the markets other farm products.

10. The 2011 earthquake in Japan disrupted global supply chains worldwide. Consider the example of a car company using Japanese parts and whose supply chain was thus interrupted by the earthquake.
- What is the effect on the price of the Japanese car parts?
  - What is the effect in the market for these cars?
  - Assume some competing car companies had different supply chains and were unaffected. What is the effect in the market for cars made by competitors of this car company?
  - What is the effect in the market for labor working for this car company? ..for labor working for the unaffected competitors?
11. Consider the labor market. Individuals supply labor to firms and firms demand labor services. Supposing an income tax acts like an increase in costs on the supply-side of this market. What happens in this market today if the government announces that next year, taxes will be lowered?
12. A minimum wage is simply a price floor in the labor market. Suppose that the current market-clearing wage in the labor market for the service industry is \$5.50/hour.
- What happens in this market when the government sets the minimum wage at \$6.00?
  - What do we call the difference between quantity supplied and quantity demanded in this case?
13. Supposing the market-clearing wage in the labor market is \$5.50 / hour, what happens if the government imposes a minimum wage of \$5.00?
14. Consider the steel market.
- What happens when the government imposes a price ceiling below the market clearing price?
  - What happens if they impose a price ceiling above the market clearing price.
15. Consider the domestic car market and show in separate graphs what happens for each of the following changes. (Consider each of the following separately.)
- Incomes rise.
  - Foreign competitors enter the market.
  - A snow storm hits Detroit and closes the auto plants for a week.
  - Due to a sudden environmental awareness movement in the US, people begin to ride bikes instead of drive.
  - Due to technological developments, auto producers computerize their production process, making them much more productive.
  - Due to technological developments, cities figure out a way to offer public transportation for free within their cities.
  - OPEC (the world producers of oil) drastically cuts the world supply of oil.

- h. Due to the fact that more people get college degrees, car producers have to offer higher wages to get good workers.
- i. The government introduces new labor laws requiring employers to buy new, ergonomically correct office furniture for their employees.
- j. The government announces that next year a new environmental tax on cars will be put into place.