

# EC201: Principles of Macroeconomics

## In-class Worksheet 3

Spring 2022

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**1. When the price of petroleum goes up, the demand for solar power ....., and the demand for cars .....**

- increases; increases
- increases; decreases
- decreases; increases
- decreases; decreases

**2. Which of the following will cause an increase in the demand for autos?**

- Price of car tires increases because of a Malaysian rubber shortage.
- Concrete steel reinforcing rods are replaced by aluminum along the Atlantic coast to prevent rusting.
- Gasoline prices drop by 50% when OPEC nations increase production.
- McDonald's increases its hamburger production in response to consumer trends.

**3. Movement along or shift?**

1. College students rush and buy discount furniture to take advantage of an unexpected price drop.
2. College students purchase many more energy drinks during finals week than during the rest of the semester.

**4. Find out what is wrong with these following statements. Then show the correct impact by drawing appropriate graphs. Hint: mixing up a movement along vs a shift.**

1. "A technological innovation that lowers the cost of producing a good might seem at first to result in a reduction in the price of the good to consumers. But a fall in price will increase demand for the good, and higher demand will send the price up again. It is not certain, therefore, that an innovation will really reduce price in the end."

2. “A study shows that eating a clove of garlic a day can help prevent heart disease, causing many consumers to demand more garlic. This increase in demand results in a rise in the price of garlic. Consumers, seeing that the price of garlic has gone up, reduce their demand for garlic. This causes the demand for garlic to decrease and the price of garlic to fall. Therefore, the ultimate effect of the study on the price of garlic is uncertain.”

5. The following table shows a demand schedule for a normal good.

| Price | Quantity demanded |
|-------|-------------------|
| \$23  | 70                |
| 21    | 90                |
| 19    | 110               |
| 17    | 130               |

1. Do you think that the increase in quantity demanded (say, from 90 to 110 in the table) when price decreases (from \$21 to \$19) is due to a rise in consumers' income? Why or why not?
2. Now suppose that the good is an inferior good. Would the demand schedule still be valid for an inferior good? Why or why not?
3. Lastly, assume you do not know whether the good is normal or inferior. Devise an experiment that would allow you to determine which one it was. Explain.

**6. Use a diagram to illustrate how each of the following events affects the equilibrium price and quantity of pizza.**

1. The price of mozzarella cheese rises.
  
  
  
  
  
  
  
  
  
  
2. The health hazards of hamburgers are widely publicized.
  
  
  
  
  
  
  
  
  
  
3. The price of tomato sauce falls.
  
  
  
  
  
  
  
  
  
  
4. The incomes of consumers rise, and pizza is an inferior good.
  
  
  
  
  
  
  
  
  
  
5. Consumers expect the price of pizza to fall next week.

**7. A study conducted by Yahoo! revealed that chocolate is the most popular flavor of ice cream in America. For each of the following, indicate the possible effects on demand, supply, or both as well as equilibrium price and quantity of chocolate ice cream.**

1. A severe drought in the Midwest causes dairy farmers to reduce the number of milk-producing cattle in their herds by a third. These dairy farmers supply cream that is used to manufacture chocolate ice cream.

2. A new report by the American Medical Association reveals that chocolate does, in fact, have significant health benefits.
3. The discovery of cheaper synthetic vanilla flavoring lowers the price of vanilla ice cream.
4. New technology for mixing and freezing ice cream lowers manufacturers' costs of producing chocolate ice cream.

8. The U.S. government has subsidized ethanol production since 1978. With the advent of affordable electric cars, policymakers are considering whether to allow the subsidy to expire. The accompanying graph represents the market for ethanol. Move the supply and/or demand curves to show how reducing the subsidy will affect the ethanol market. Show the impact of this policy in a graph.

9. During the Obama administration, the development of low-cost batteries for electric cars received large amounts of federal funding in terms of subsidies. Meanwhile, American households gave a higher priority towards minimizing their environmental impact. Consider the market for zero-emissions electric vehicles where there is an upward-sloping supply curve and a downward-sloping demand curve. Which curves will move in which direction? What happens to the equilibrium price and quantity?