

Sexton 6e Solutions Manual for Problems

Chapter 1:

1. In most countries the birth rate has fallen as incomes and the economic opportunities for women have increased. Use economics to explain this pattern.

**Answer: One of the most important resources used raising children has historically been the mother's time. As opportunities for women to hold jobs, start businesses, and participate in political life increase, the cost of using women's time for raising children increases. As the cost of the mother's time rises, fewer children are born.**

2. Write your own definition of economics. What are the main elements of the definition?

**Answer: The definition must recognize the central parts of the economist's point of view: resources are scarce; scarcity forces us to make choices; and the cost of any choice is the highest valued of the lost opportunities.**

3. Are the following topics ones that would be covered in microeconomics or macroeconomics?

- a. the effects of an increase in the supply of lumber on the home-building industry.
- b. changes in the national unemployment rate.
- c. changes in the inflation rate.
- d. changes in the country's economic growth rate.
- e. the price of concert tickets.

**Answers: a. microeconomics; b. macroeconomics; c. macroeconomics; d. macroeconomics; e. microeconomics.**

4. Identify which of the following headlines represents a microeconomic topic and which represents a macroeconomic topic.

- a. "U.S. Unemployment Rate Reaches Historic Lows"
- b. "General Motors Closes Auto Plant in St. Louis"
- c. "OPEC Action Result in a General Increase in Prices"
- d. "Companies Cut the Cost of Health Care for Employees"
- e. "Lawmakers Worry about the Possibility of a US Recession"
- f. "Colorado Rockies Make Outfielder Highest Paid Ballplayer"

**Answer: Macroeconomics examines economic problems that influence the whole economy. The focus is on aggregate or total economic activity. Headlines a, c, and e reflect the overall health of the economy. Microeconomics explains the actions of smaller units. The focus is on the decision-making behavior of firms and households. Headlines b, d, and f reflect the actions of firms.**

5. The Environmental Protection Agency asks you to help them understand the causes of urban pollution. Air pollution problems are worse the higher the Air Quality Index. You develop the following two hypotheses.

Hypothesis I: Air pollution will be a greater problem the higher the average temperature in the urban area.

Hypothesis II: Air pollution will be a greater problem, the greater the population of the urban area.

Test each hypothesis with the facts given below. Which hypothesis fits the facts better? Have you developed a theory?

Metropolitan Statistical Area	Days with Polluted Air*	AverageMaximum Temperature	Population (thousands)
Cincinnati, OH	30	64.0	1,979
El Paso, TX	13	77.1	680
Milwaukee, WI	12	55.9	1,690
Atlanta, GA	24	72.0	4,112
Philadelphia, PA	33	63.2	5,101
Albany, NY	8	57.6	876
San Diego, CA	20	70.8	2,814
Los Angeles, CA	80	70.6	9,519

\*Air Quality Index greater than 100 (2002)  
**Source:** U.S. Dept. of Commerce, Bureau of Census, 2002 Statistical Abstract of the United States, Tables Nos. 30, and 363; U.S. EPA, Air Trends Report, 2002, EPA.Gov/airtrends/Factbook.

**Answer: The data support the second hypothesis better than the first. The number of days with polluted air generally increases with the population. The five cities with the most days “with polluted air” are large places. The first hypothesis does not seem to be supported by the data. El Paso, Texas, was the hottest place on our list and had relatively few polluted days. The causes of air pollution are complex and many things affect the level of pollution in a city. In our limited world of seven cities, the second hypothesis is supported by the facts, and we could make a theoretical statement that air pollution will increase in general as population increases.**

6. Do any of the following statements involve fallacies? If so, which ones do they involve?

a. Because sitting in the back of classrooms is correlated with getting lower grades in the class, students should always sit closer to the front of the classroom. **This involves confusing correlation with causation.**

b. Historically, the stock market rises in years the NFC team wins the Super Bowl and falls when the AFC wins the Super Bowl; I am rooting for the NFC team to win for the sake of my investment portfolio. **This involves confusing correlation with causation.**

c. When a basketball team spends more to get better players, it is more successful, which proves that all the teams should spend more to get better players. **This involves the fallacy of composition.**

d. Gasoline prices were higher last year than in 1970, yet people purchased more gas, which contradicts the law of demand. **This is a violation of the *ceteris paribus* conditions.**

e. An increase in the amount of money I have will make me better off, but an increase in the supply of money in the economy will not make Americans as a group better off. **There is no fallacy in this statement.**

7. In the 1940s, Dr. Melvin Page conducted a national campaign to stop people other than infants from drinking milk. According to Page, milk was a dangerous food and a leading cause of cancer. He pointed to the fact that more people died of cancer in Wisconsin, the nation's leading milk producer, than any other state as proof of his claim. How would you evaluate Dr. Page's claim?

**Answer: This is a case of mistaking correlation for causation. People in Wisconsin tended to live long lives and since cancer is a disease of middle and old age, it was a more frequent cause of death in Wisconsin than in other states. An area low in cancer deaths is likely to be an area of poor health where inhabitants die young.**

8. Are the following statements normative or positive, or do they contain both normative and positive statements?

a. A higher income-tax rate would generate increased tax revenues. Those extra revenues should be used to give more government aid to the poor. **Both normative and positive statements.**

b. The study of physics is more valuable than the study of sociology, but both should be studied by all college students. **Normative statements.**

c. An increase in the price of corn will decrease the amount of corn purchased. However, it will increase the amount of wheat purchased. **Positive statements.**

d. A decrease in the price of butter will increase the amount of butter purchased, but that would be bad because it would increase Americans' cholesterol levels. **Both normative and positive statements.**

e. The birth rate is reduced as economies urbanize, but it also leads to a decreased average age of developing countries' populations. **Positive statements.**

9. In the debate about clean air standards we have often heard the statement, "A nation as rich as the United States should have no pollution." Why is this a normative statement? Would it help you make a decision on national air quality standards? Describe two positive statements that might be useful in determining the air quality standards.

**Answer: This is a normative statement because it is a matter of opinion. Unless you held this opinion or respected the speaker, this normative statement would not cause you to support a zero tolerance standard for air pollution. Positive statements about the effect of such standards, which could be tested, would refer to changes in the costs and/or benefits of adopting the more extreme standards. Examples might include "imposing zero pollution standards will significantly reduce the industrial output of the U.S. economy" or "the reduction in health problems resulting from the imposition of zero pollution standards will provide the benefits of significant reduction in health care costs."**

10. Answer the following questions:

a. What is the difference between self-interest and selfishness? **Self-interest is the desire to improve one's life. It includes the desire to advance any goal one cares about, including many "altruistic" goals, such as helping the poor. Selfishness is the "excessive" concern for oneself and one's own advantage without regard for others.**

b. Why does inaction have consequences? **Inactions are choices not to do something. Inactions, like actions, have consequences. For example, if you choose not to study, you may fail an exam.**

c. Why are observation and prediction more difficult in economics than in chemistry? **Observation and prediction are more difficult in economics than in chemistry because, unlike chemists, economists generally cannot observe behavior in a laboratory setting where all relevant environmental variables can be carefully controlled. Economists study economic behavior in the real world, where many variables influence behavior simultaneously. It is difficult in a complex global economy to observe and predict relationships between variables, isolated from other effects.**

d. Why do economists look at group behavior rather than individual behavior? **Economics is concerned with reaching generalizations about human behavior. If one generalizes on the basis of observed individual behavior, one risks committing the fallacy of composition. Generalizations based upon observed group behavior are likely to be both more realistic and useful (reliable).**

11. Using the map analogy from the chapter, talk about the importance of abstraction. How do you abstract when taking notes in class?

**Answer: Abstraction enables an observer to highlight what are considered significant details for her purposes. If maps attempted to capture even the most minute of details, they would be far too complicated and difficult to read for their intended purposes. Instead, good maps provide useful information by highlighting important features. Likewise, students abstract when taking notes. Rather than attempt to write down every word spoken by an instructor, a student is likely to outline the main ideas that are expressed. By abstracting in this way, a student can master the information that is most essential to understanding the topic at hand.**

## Chapter 2:

1. Which of the following goods are scarce?

- a. garbage
- b. salt water in the ocean
- c. clothes
- d. clean air in a big city
- e. dirty air in a big city
- f. a public library

**Answer: Scarce goods are those that we would like to have more of, but given limited resources, we must make choices. The following goods are all scarce: c. clothes; d. clean air in a big city; f. a public library. Note that garbage is not a good, but a reduction in the amount of garbage would be a good.**

2. Explain the difference between poverty and scarcity.

**Answer: Being poor means that you have access to few resources, which limits the goods and services you consume. Scarcity means you don't have enough resources to do everything you want to do, so you have to make choices. Everyone experiences scarcity, because we can always think of more things that we want than we can produce with our resources.**

3. The automotive revolution after World War II reduced the time involved for travel and shipping goods. This innovation allowed the U.S. economy to produce more goods and services since it freed resources involved in transportation for other uses. The transportation revolution also increased wants. Identify two ways the car and truck revealed new wants.

**Answer: The car freed Americans to travel and helped to create the tourism business. New wants included motels, resorts, and theme parks. The increased importance of auto and truck transportation also created the desire for more and better roads and highways. The car also allowed people to live farther from where they worked, so that people wanted more land and newer houses.**

4. The price of a one-way bus trip from Los Angeles to New York City is \$150.00. Sarah, a school teacher, pays the same price in February (during the school year) as in July (during her vacation), so the cost is the same in February as in July. Do you agree?

**Answer: Since Sarah's time is probably worth more during school (it would cost part of her salary), the opportunity cost of the trip is higher in February than in July.**

5. McDonald's once ran a promotion that whenever St. Louis Cardinal's slugger Mark McGwire hit a home run into the upper deck at Busch Stadium, McDonald's gave anyone with a ticket to that day's game a free Big Mac. If holders of ticket stubs have to stand in line for ten minutes, is the Big Mac really "free?"

**Answer: No. First of all, McDonald's uses scarce resources to produce the burger, so it's not "free" to them. Secondly, if people value their time at all, ten minutes standing in line to get the burger carries an opportunity cost equal to the value to them of whatever else they could have done with the ten minutes. Also included is the opportunity cost of driving to McDonald's to get the "free" Big Mac.**

6. List some things that you need. Then ask yourself if you would still want some of those things if the price were five times higher. Would you still want them if the price were 10 times higher?

**Answers will vary. The main point here is to recognize that how much of something you "need" depends on what you must give up to get it. Would you be willing to pay \$10 or even \$20 for a hamburger? Would you be willing to pay \$40 or even \$80 for admission to a new blockbuster film?**

7. List the opportunity costs of the following:

- a. going to college
- b. missing a lecture
- c. withdrawing and spending \$100 from your savings account, which earns 5 percent interest annually
- d. going snowboarding on the weekend before final examinations

**Answer: The opportunity cost of an activity is always the value of the best alternative given up.**

**a. The opportunity cost of going to college includes not just expenses such as tuition and books, but also the lost income that could have been earned while attending college. On the other hand, room and board expenses should not be included in the calculation of opportunity cost, if those expenses are equivalent to that which would be incurred in the best foregone alternative to attending college.**

**b. The opportunity cost of missing a lecture includes the potential damage to one's grade in a course from not being present while important subject material is covered, as well as the knowledge's foregone value in the "real world." The magnitude of the opportunity cost depends partly on how much essential information the instructor provides during the missed class session.**

**c. The opportunity cost of withdrawing and spending \$100 from your savings account is the 5% interest which could have been earned annually if the funds remained in the savings account.**

**d. The opportunity cost of going snowboarding on the weekend before final examinations is likely to include the value of lost study time and possibly a lower course grade, as well as the explicit costs of the snowboarding trip, as well as the financial costs.**

8. Which of the following activities require marginal thinking, and why?

- a. studying
- b. eating
- c. driving
- d. shopping
- e. getting ready for a night out

**Answer: Marginal thinking involves incremental changes to a plan of action. All of the activities listed involve marginal thinking. When studying, one chooses whether or not to study for one more hour; when eating, one chooses whether or not to consume one more portion; when driving, one chooses whether or not to travel one more mile (or one more mile per hour); when shopping, one chooses whether or not to buy one more item or visit one more store; when getting ready for a night out, one chooses whether or not to spend another minute styling one's hair.**

9. Should you go to the movies this Friday? List the factors that affect the possible benefits and costs of this decision. Explain where uncertainty affects the benefits and costs.

**Answer: The benefits of going to the movie include the happiness you receive from being entertained and the social interaction with friends. These are uncertain because they depend on the quality of the movie and your companionship. Costs include the price of the movie ticket and the value to you of the time you give up to go to the movie. Uncertainty also affects your costs since you do not know for certain what you would get out of your alternative use of your time.**

10. Explain why following the rule of rational choice makes a person better off.

**Answer: As long as a person follows the rule of rational choice, they will always make decisions where they expect to gain more in benefits than they have to give up in costs. They will always be better off in this case. However, if a person's expectations about benefits or costs are wrong, their decisions may still turn out to make them worse off.**

11. Which of the following are positive incentives? Negative incentives? Why?

- a. A fine for not cleaning up after your dog defecates in the park
- b. A trip to Hawaii paid for by your parents or significant other for earning an A in your economics course.

c. A higher tax on cigarettes and alcohol.

d. A subsidy for installing solar panels on your house.

**Answer: Positive incentives are those that either increase benefits or reduce costs and thus tend to increase the level of an activity. Both of the following are examples of positive incentives: b. a trip to Hawaii paid for by your parents or significant other for earning an "A" in your economics course; d) a subsidy for installing solar panels on your house. Negative incentives either reduce benefits or increase costs, and thus tend to decrease the level of the related activity or behavior. Both of the following are examples of negative incentives: a. a fine for not cleaning up after your dog defecates in the park; c. a higher tax on cigarettes and alcohol.**

12. Modern medicine has made organ transplants a common occurrence, yet the number of organs that people want far exceeds the available supply. According to CNN, ten people die each day because of a lack of transplantable organs like kidneys and livers. Some economists have recommended that an organ market be established through which doctors and others could pay people for the right to use their organs when they die. The law currently forbids the sale of organs. What do you think of such a proposal? What kind of incentives would an organ market provide for people to allow others to use their organs? What would happen to the supply of organs if, instead of relying on donated kidneys, livers, and retinas, doctors and hospitals could bid for them? What drawbacks would a free market in organs have? Have you made arrangements to leave your organs to your local organ bank? Would you do so if you could receive \$50,000 for them?

**Answer: An organ market that provided cash rewards would likely increase the supply of available organs, especially if people from poor countries were allowed to participate. It would also allow people in dire need of a particular organ to go into the market and purchase it rather than put their name on a waiting list. Many people, however, feel that a person's body parts have a special status and should not be offered for sale. Some people worry that only the rich would get organs in a market while others fear that a market would result in people being taken advantage of or even murdered for their valuable organs. They prefer the current system where only donated organs are accepted, and are allocated by physicians according to need.**

13. Throughout history, many countries have chosen the path of autarky, choosing to not trade with other countries. Explain why this path would make a country poorer.

**Answer: Denying trade possibilities also eliminates the possibility of specialization. In autarky, a country must produce everything it consumes. Scarce resources will be wasted producing goods with a higher opportunity costs. Trading would allow the country to produce more with the same resources.**

14. Farmer Fran can grow soybeans and corn. She can grow 50 bushels of soybeans or 100 bushels of corn on an acre of her land for the same cost. The price of soybeans is \$1.50 per bushel and the price of corn is \$.60 per bushel. Show the benefits to Fran of specialization. What should she specialize in?



**Answer: The opportunity cost of growing soybeans is the lost value because Fran can't grow corn worth \$60. The opportunity cost of growing corn on her land is the lost opportunity to grow and sell soybeans, which equals \$75. Fran should specialize in soybeans, which is the crop with the lowest opportunity cost. For each acre of corn Fran converts to soybeans, she will gain \$15.**

15. Which region has a comparative advantage in the following goods:

- a. wheat: Colombia or the United States?
- b. coffee: Colombia or the United States?
- c. timber: Iowa or Washington?
- d. corn: Iowa or Washington?

**Answers: a. The United States has a comparative advantage in wheat production; b. Columbia has a comparative advantage in coffee production; c. Washington, with its many acres of forests, has a comparative advantage in timber; d. Iowa, with its many acres of fertile soil, has a comparative advantage in corn production. In each case, the area with the lowest opportunity cost of producing a particular good had the comparative advantage in producing it.**

16. Why is it important that the country or region with the lower opportunity cost produce the good? How would you use the concept of comparative advantage to argue for reducing restrictions on trade between countries?

**Answer: It is important that a country or region specialize in the production of a good for which it has the lower opportunity cost in order to make the best use of available resources. By specializing in the production of a good for which a country has a comparative advantage and then trading for other desirable goods, a country is able to gain the greatest benefit from its available resources. Trade restrictions force countries to specialize less, and thereby raise the opportunity cost of production, and reduces total output.**

17. People communicate with each other in the market through the effect their decisions to buy or sell have on prices. Indicate how each of the following would affect prices by putting a check in the appropriate space.

- a. People who see an energetic and loveable Jack Russell Terrier in a popular TV series want Jack Russell Terriers as pets. The price of Jack Russell Terriers \_\_\_\_ Rises \_\_\_\_ Falls.
- b. Aging retirees flock to Tampa, Florida, to live. The price of housing in Tampa \_\_\_\_ Rises \_\_\_\_ Falls.
- c. Weather-related crop failures in Colombia and Costa Rica reduce coffee supplies. The price of coffee \_\_\_\_ Rises \_\_\_\_ Falls.
- d. Sugar cane fields in Hawaii and Louisiana are replaced with housing. The price of sugar \_\_\_\_ Rises \_\_\_\_ Falls.

e. More and more students graduate from U.S. medical schools. The wages of U.S. doctors\_\_\_\_  
Rises \_\_\_\_ Falls.

f. Americans are driving more and they are driving bigger, gas-guzzling cars like sports utility vehicles.  
The price of gasoline \_\_\_\_\_ Rises \_\_\_\_\_ Falls.

**Answers: a. Price of Jack Russell Terriers rises; b. Price of housing in Tampa rises; c. Price of coffee rises; d. Price of sugar rises; e. Wages of U.S. doctors fall;f. Price of gasoline Rises.**

18. Prices communicate information about the relative value of resources. Which of the following would cause the relative value and, hence, the price, of potatoes to rise?

- a. A Fungus infestation wipes out half the Idaho potato crop.
- b. The price of potato chips rises.
- c. Scientists find that eating potato chips makes you better looking.
- d. The prices of wheat, rice, and other potato substitutes fall dramatically.

**Answers: a., b., and c. would cause increases in the relative value and price of potatoes. In d., a reduction in the prices of potato substitutes would make alternatives more attractive and reduce the relative value and price of potatoes.**

19. Imagine that you are trying to decide whether to cross a street without using the designated crosswalk at the trafficsignal. What are the expected marginal benefits of crossing? The expected marginal costs? How would the followingconditions change your benefit–cost equation?

- a. The street was busy.
- b. The street was empty and it was 3 A.M.
- c. You were in a huge hurry.
- d. A police officer was standing 100 feet away.
- e. The closest crosswalk was a mile away.
- f. The closest crosswalk was 10 feet away.

**Answer: The expected marginal benefit of crossing a street is the ability to get to the other side quickly, rather than walk to the crosswalk and wait for the signal to change. The expected marginal cost is the risk of being struck by a car or being ticketed for violating pedestrian laws.**

**a. The busier the street, the greater the risk of being struck by a passing car and thus the greater the expected marginal cost.**

**b. The more empty the street, the lower the risk of being struck by a passing car and thus the lower the expected marginal cost.**

- c. The more in a hurry you are, the greater the expected marginal benefit of crossing the street rapidly.
- d. The presence of a police officer nearby raises the expected marginal cost of crossing away from the crosswalk by increasing the likelihood of being fined for your illegal actions.
- e. The further away the nearest crosswalk, the greater the expected marginal benefit of crossing illegally, in order to avoid a long walk.
- f. The closer the nearest crosswalk, the lower the expected marginal benefit of crossing illegally.