

TEST BANK

# Principles of Macroeconomics

SECOND EDITION

*Dirk Mateer*

UNIVERSITY OF KENTUCKY

*Lee Coppock*

UNIVERSITY OF VIRGINIA

*Alissa Dubnicki*

KEYSTONE STRATEGY, LLC

*Nora Underwood*

UNIVERSITY OF CENTRAL FLORIDA

*Tom Scheiding*

CARDINAL STRITCH UNIVERSITY

*Ross Vanwassenhove*

UNIVERSITY OF HOUSTON

*Kurt Norlin*

BITTNER DEVELOPMENT GROUP, LLC

*Anne-Marie Ryan-Guest*

NORMANDALE COMMUNITY COLLEGE

*Naranchimeg Mijid*

CONNECTICUT CENTER FOR INNOVATIVE  
ENTREPRENEURS, LLC



W • W • NORTON & COMPANY • NEW YORK • LONDON

W. W. Norton & Company has been independent since its founding in 1923, when William Warder Norton and Mary D. Herter Norton first published lectures delivered at the People's Institute, the adult education division of New York City's Cooper Union. The firm soon expanded its program beyond the Institute, publishing books by celebrated academics from America and abroad. By midcentury, the two major pillars of Norton's publishing program—trade books and college texts—were firmly established. In the 1950s, the Norton family transferred control of the company to its employees, and today—with a staff of four hundred and a comparable number of trade, college, and professional titles published each year—W. W. Norton & Company stands as the largest and oldest publishing house owned wholly by its employees.

Copyright © 2018 by W. W. Norton & Company, Inc.

W. W. Norton & Company, Inc. 500 Fifth Avenue, New York, N.Y. 10110-0017

[wwnorton.com](http://wwnorton.com)

W. W. Norton & Company Ltd. Castle House, 75/76 Wells Street, London W1T 3QT

All rights reserved.

Associate Media Editors: Stefani Wallace and Victoria Reuter

Production Manager: Eric Pier-Hocking

Project Editor: Melissa Atkin

Production Editor: Stephen Barichko

Composition by Westchester Publishing Services

# CONTENTS

Preface

v

## **PART I Introduction**

Chapter 1   Five Foundations of Economics	1
Chapter 2   Model Building and Gains from Trade	43
Chapter 3   The Market at Work: Supply and Demand	97
Chapter 4   Market Outcomes and Tax Incidence	160
Chapter 5   Price Controls	202

## **PART II Macroeconomic Basics**

Chapter 6   Introduction to Macroeconomics and Gross Domestic Product	255
Chapter 7   Unemployment	297
Chapter 8   The Price Level and Inflation	337
Chapter 9   Savings, Interest Rates, and the Market for Loanable Funds	386
Chapter 10   Financial Markets and Securities	433

## **PART III The Long and Short of Macroeconomics**

Chapter 11   Economic Growth and the Wealth of Nations	478
Chapter 12   Growth Theory	520
Chapter 13   The Aggregate Demand–Aggregate Supply Model	563
Chapter 14   The Great Recession, the Great Depression, and Great Macroeconomic Debates	608

## **PART IV Fiscal Policy**

Chapter 15   Federal Budgets: The Tools of Fiscal Policy	653
Chapter 16   Fiscal Policy	693

## **PART V Monetary Policy**

Chapter 17   Money and the Federal Reserve	740
Chapter 18   Monetary Policy	781

## **PART VI International Economics**

Chapter 19   International Trade	835
Chapter 20   International Finance	881

# PREFACE

When was the last time you were pleased with the consistency and quality of the assessment supplements that come with introductory texts? If you are like most professors, you probably find that these assessment packages do not always meet your needs. To address this issue, Norton has collaborated with Valerie Shute (Florida State University) and Diego Zapata-Rivera (Educational Testing Services) to develop a methodology for delivering high-quality, valid, and reliable assessment supplements through our Test Banks and extensive suite of support materials.

## WHY A NEW APPROACH?

In evaluating the test banks that accompany introductory texts, we found four substantive problem areas associated with the questions:

1. Test questions were misclassified in terms of type and difficulty.
2. The prevalence of low-level and factual questions misrepresented the goals of the course.
3. Topics were unevenly distributed: Trivial topics were tested via multiple items, while important concepts were not tested at all.
4. Links to course topics were too general, thus preventing diagnostic use of the item information.

## STUDENT COMPETENCIES AND EVIDENCE-CENTERED DESIGN

In December 2007, Norton conducted a focus group with the brightest minds in educational testing to create a new model for assessment. A good assessment tool must:

1. define what students need to know and the level of knowledge and skills that constitute competence in the concepts they are learning about;
2. include test items that provide valid and reliable evidence of competence by assessing the material to be learned at the appropriate level; and
3. enable instructors to judge accurately what students know and how well they know it, thus allowing instructors to focus on areas where students need the most help.

## HOW DOES IT WORK?

The Test Bank authors started with a detailed concept summary that had been broken down into learning objectives. The authors then developed a concept map for each chapter that shows the relationships among these ideas. Once the concept maps were created, the authors developed six types of questions designed to test students' knowledge of each concept. By asking students questions that vary in both type and level of difficulty, instructors can gather different types of evidence, which will allow them to assess more effectively how well students understand specific concepts.

## SIX QUESTION TYPES

1. Remembering questions—test declarative knowledge, including textbook definitions and relationships between two or more pieces of information. Can students recall or remember the information in the same form it was learned?

2. Understanding questions—pose problems in a context different from the one in which the material was learned, requiring students to draw from their declarative and/or procedural understanding of important concepts. Can students explain ideas or concepts?
3. Applying questions—ask students to draw from their prior experience and use critical-thinking skills to take part in qualitative reasoning about the real world. Can students use learned information in another task or situation?
4. Analyzing questions—test students' ability to break down information and see how different elements relate to each other and to the whole. Can students distinguish among the different parts?
5. Evaluating questions—ask students to assess information as a whole and frame their own argument. Can students justify a stand or decision?
6. Creating questions—pose questions or objectives that prompt students to put elements they have learned together into a coherent whole to generate new ideas. Can students create a new product or point of view based on data?

### THREE DIFFICULTY LEVELS

1. Easy questions—require a basic understanding of the concepts, definitions, and examples presented in the textbook.
2. Medium questions—direct students to use critical-thinking skills and to demonstrate an understanding of core concepts independent of specific textbook examples.
3. Difficult questions—ask students to synthesize textbook concepts with their own experience, making analytical inferences about economic topics and more.

### GENERAL RULES FOR NORTON ASSESSMENT

Each question measures and links explicitly to a specific competency and is written with clear, concise, and grammatically correct language that suits the difficulty level of the specific competency being assessed. To ensure the validity of the questions, no extraneous, ambiguous, or confusing material is included, and no slang expressions are used. In developing the questions, every effort has been made to eliminate bias (e.g., race, gender, cultural, ethnic, regional, disability, age, and so on) to require specific knowledge of the material studied, not general knowledge or experience. This ensures accessibility and validity.

### READING THE TEST ITEM NOTATION

Each question in the Test Bank is tagged with five pieces of information designed to help instructors create the most ideal mix of questions for their quizzes or exams. These tags are:

**ANS:** This is the correct answer for each question.

**DIF:** This is the difficulty assigned to the problem. Problems have been classified as Easy, Medium, or Difficult.

**REF:** This is the section in the textbook from which a question is drawn.

**OBJ:** This references the learning objective, taken from the chapter-opening concept map, that is tested by the question.

**MSC:** This is the knowledge type (see above) that the question is designed to test.

To ensure that the test bank material flows in the same order as the topics covered in the textbook, the questions have been numbered in order based on the “REF” field.

## **CHAPTER 1**

# Five Foundations of Economics

### **LEARNING OBJECTIVES**

- 1.1 What is economics?
- 1.2 What are five foundations of economics?

## MULTIPLE CHOICE

1. In economics, choices are necessary because of the presence of
- a. luxuries.
  - b. inefficiency.
  - c. needs.
  - d. scarcity.
  - e. incentives.

ANS: D                      DIF: Easy                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

2. Economics is the study of
- a. how to make money.
  - b. how to allocate resources to satisfy wants and needs.
  - c. capitalism.
  - d. how to make workers more productive and firms more profitable.
  - e. markets.

ANS: B                      DIF: Moderate                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

3. Thomas Malthus's prediction of mass starvation failed to come true because of increases in
- a. population.
  - b. productivity.
  - c. temperature.
  - d. government involvement.
  - e. income.

ANS: B                      DIF: Moderate                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Remembering

4. The basic goal of economics is to
- a. control the effects of government action.
  - b. determine how to distribute all that is produced in an economy.
  - c. address the scarcity problem created because the population's desire for goods exceeds the ability to produce them.
  - d. match limited resources to people's limited wants and needs.
  - e. control tastes and wishes so that there will be enough resources to produce all the goods and services that people want.

ANS: C                      DIF: Moderate                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

5. An economist is an individual who would be LEAST able to answer which research question?
- a. how much of a product is purchased at a specific price
  - b. how the tastes and preferences of consumers are determined
  - c. what firms decide to produce
  - d. how goods and services are distributed to the population
  - e. how firms decide to produce a good or service

ANS: B                      DIF: Moderate                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding



6. The need to study economics would cease to exist if
- the government stopped controlling people's actions.
  - people were free to make decisions on their own.
  - people put forth the effort required to attain the goods and services they wanted.
  - people earned more than they spent.
  - there were enough resources to produce all the goods and services people would like to obtain.

ANS: E                      DIF: Moderate      REF: What Is Economics?  
 OBJ: 1.1                      MSC: Understanding

7. As a discipline, economics is best described by which of the following?
- the study of how to control the effects of government actions
  - the study of how to control the preferences of consumers so that there will be enough resources to produce all the goods and services that consumers want
  - the study of how to use scarce resources to satisfy unlimited wants and needs
  - the study of how to dispose of excess goods and services that nobody wants
  - the study of how to maximize profits for firms

ANS: C                      DIF: Moderate      REF: What Is Economics?  
 OBJ: 1.1                      MSC: Understanding

8. When Noah's parent tells him not to study economics because it is a pointless discipline, why is he or she INCORRECT?
- The government continues to play a role in our daily lives.
  - People have the freedom to do whatever they want, and economists have nothing to add to their decision-making process.
  - Economics is a tool used to understand what happens in a world where there are not enough resources to produce all the goods and services that are wanted and needed.
  - Economics has nothing to offer in terms of understanding the stock market.
  - Economics has nothing to offer in terms of understanding government programs like Social Security.

ANS: C                      DIF: Moderate      REF: What Is Economics?  
 OBJ: 1.1                      MSC: Understanding

9. When consumers discard their gasoline-powered automobiles for electric-powered ones, this partially reflects the \_\_\_\_\_ of gasoline.
- scarcity
  - luxury
  - necessity
  - specialization
  - incentive

ANS: A                      DIF: Moderate      REF: What Is Economics?  
 OBJ: 1.1                      MSC: Applying

10. As a new firm in the apple-picking business, Nicolette has considered adding an economist to her management team. This economist would be unable to help her managerial team determine
- the lowest cost way of picking apples.
  - how many apples consumers will purchase at different prices.
  - why people eat apples.
  - the effect government regulations would have on the price of apples.
  - the lowest cost way of distributing apples.

ANS: C                      DIF: Moderate              REF: What Is Economics?  
 OBJ: 1.1                      MSC: Applying

11. A good is \_\_\_\_\_ if it takes even a small amount of time, energy, or money to acquire.
- abundant
  - in shortage
  - cheap
  - scarce
  - virtually free

ANS: D                      DIF: Moderate              REF: Trade-offs              OBJ: 1.1 | 1.2  
 MSC: Understanding

12. Because of scarcity
- individuals and societies are allowed no choice about which wants and needs to satisfy.
  - individuals and societies must choose which wants and needs to satisfy.
  - all choices about wants and using resources must be made by the government.
  - choices can be made about which wants to satisfy, but not about which resources to use.
  - choices must be made about which resources to use, but not about which wants to satisfy.

ANS: B                      DIF: Moderate              REF: What Is Economics?  
 OBJ: 1.1                      MSC: Understanding

13. Which of the following statements best represents the fact that Logan cannot put in extra hours of work because of scarcity?
- He doesn't have enough time for additional work because he needs to spend time with his family and there are only so many hours in the day.
  - He doesn't like going to work, so why would he work more than he has to?
  - He doesn't think that overtime pay is high enough.
  - He is worried that if he works extra hours, he will get bored with his job.
  - He doesn't want his coworkers to feel pressure to work more because he is working additional hours.

ANS: A                      DIF: Moderate              REF: Trade-offs              OBJ: 1.1 | 1.2  
 MSC: Applying

14. Which scenario describes studying for an economics course without applying the scarcity principle?
- Mary studies two hours for every one hour she is in the classroom.
  - Jonah studies three afternoons a week until he understands the material or until dinner, whichever comes first.
  - Lucy studies with her roommate who is also taking the course, and they discuss economic concepts during any free time they can find.
  - Chloe studies for this course and does nothing else.
  - Rafael talks to an economist whenever he has a chance to do so.

ANS: D                      DIF: Moderate              REF: Trade-offs              OBJ: 1.1 | 1.2  
 MSC: Applying

15. What is the strongest argument for why we need more economists today than ever before?
- We have a need for more wealth given the higher standard of living that individuals demand.
  - Economists are needed to address the allocation of scarce resources as a result of the world's growing population.
  - Economists are needed to make sure that firms continue to make profits.
  - Economists are needed to make sure that consumers are well informed about their possible purchase options and that they budget their finances appropriately.
  - Economists are needed to make sure that the government doesn't involve itself too much in the economy.

ANS: B                      DIF: Moderate              REF: What Is Economics?

OBJ: 1.1                      MSC: Evaluating

16. Macroeconomics is the study of
- the economic motives of voters and elected officials.
  - individual decision-making units such as households and businesses.
  - how government purchases affect specific markets.
  - the operation of the economy as a whole.
  - the interaction between the government and businesses.

ANS: D                      DIF: Easy                      REF: Microeconomics and Macroeconomics

OBJ: 1.1                      MSC: Remembering

17. Which of the following is a macroeconomic question?
- How many textbooks should be published by a publisher?
  - How much should English majors earn after college?
  - How do members of a household decide whether to clean their own houses or hire someone else to do it?
  - What is the rate of unemployment?
  - What is the price of a new 40-inch television?

ANS: D                      DIF: Moderate              REF: Microeconomics and Macroeconomics

OBJ: 1.1                      MSC: Applying

18. Microeconomics is the study of
- how government activities affect the economy.
  - individual decision-making units.
  - collective decision making.
  - the operation of the economy as a whole.
  - the interaction between the government and businesses.

ANS: B                      DIF: Easy                      REF: Microeconomics and Macroeconomics

OBJ: 1.1                      MSC: Remembering

19. Microeconomics is the branch of economics that focuses on the
- entire economy.
  - production side of the economy.
  - consumption side of the economy.
  - involvement of the government in the entire economy.
  - choices and decision making of individuals and firms.

ANS: E                      DIF: Easy                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Remembering

20. Which of the following is a microeconomic question?
- What are the total production levels in the economy?
  - How can we best encourage economic growth?
  - What is the overall price level in the economy?
  - What are the variables that determine the price of a specific good?
  - How can we reduce the unemployment rate among Hispanic men?

ANS: D                      DIF: Moderate                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Applying

21. Which of the following is NOT a type of incentive?
- positive
  - negative
  - complementary
  - indirect
  - direct

ANS: C                      DIF: Easy                      REF: Incentives                      OBJ: 1.2  
MSC: Remembering

22. The patent system
- acts as a direct positive incentive.
  - acts as a direct negative incentive.
  - acts as an indirect positive incentive.
  - acts as an indirect negative incentive.
  - does not provide an incentive.

ANS: A                      DIF: Difficult                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

23. On which of the following concepts do economists focus their study when explaining how humans behave?
- fairness
  - money
  - emotions
  - incentives
  - justice

ANS: D                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Understanding

24. Entrepreneurs are willing to take risks because
- technology provides a way to sidestep the patent and copyright system.
  - the patent and copyright system provides an exclusive right to sell the product for a period of time.
  - the patent and copyright system guarantees a certain level of profit.
  - technology always increases costs and prevents competitors from entering the market.
  - the patent and copyright system guarantees that the risks taken will be rewarded.

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Understanding

25. Public buildings in the United States are required to be accessible to the disabled and, as a result, almost all have an elevator. What would be an example of a positive direct incentive for those who can to use stairs?
- Using the stairs will make it seem that they care about their health and that they aren't lazy.
  - Using the stairs will increase the risk of tripping and falling.
  - Using the stairs will take more time than taking the elevator and will increase the risk of missing an important meeting.
  - Using the stairs will give them some exercise and make them healthier.
  - Using the stairs will put elevator repair professionals out of work.

ANS: D                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

26. If the government wanted to give people a negative direct incentive not to save money, what would be the appropriate policy?
- providing individuals a subsidy to save their money
  - providing funding for an advertising campaign encouraging people to spend more money
  - informing individuals that saving money causes people not to spend money, which will cause them to lose their jobs
  - imposing a tax on individuals for saving their money
  - informing consumers about all that they could buy with their money with the hope that they spend more

ANS: D                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

27. An example of a direct negative incentive is
- providing a commission for sales.
  - awarding a promotion for hard work.
  - threatening to fire those who do not perform well.
  - providing an orientation for new employees.
  - providing generous benefits and pay for employees.

ANS: C                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

28. An example of a direct positive incentive is
- a prison sentence for committing a crime.
  - unemployment insurance for those who are laid off.
  - providing a workplace safety program.
  - providing a commission for sales.
  - threatening to fire those who do not perform well.

ANS: D                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

29. Actions and activities are encouraged with which type of incentive?
- positive
  - negative
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Easy                      REF: Incentives              OBJ: 1.2  
MSC: Remembering

30. A parent that pays a child an allowance for doing chores is providing a(n) \_\_\_\_\_ incentive.
- positive
  - negative
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

31. Economics professors are well aware of the importance of incentives. Which of the following situations shows the use of a positive incentive?
- Students who show up late to class will not be allowed in the classroom.
  - Students who do not have a doctor's note will not be allowed to take an exam at a different time.
  - Students can choose whether they want to attend class—there is no attendance policy.
  - Students can choose to get a higher grade by doing extra credit work.
  - The professor decides to teach the class by reading out of the textbook to the entire class.

ANS: D                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

32. A car insurance company is willing to offer accident-free drivers a discount. This is an example of
- a positive incentive.
  - a negative incentive.
  - an opportunity cost.
  - a comparative advantage.
  - scarcity.

ANS: A                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

33. Many professors have a policy that punishes individuals if they don't come to class. Instead of punishing students who don't attend class, what could the professor do to provide a positive incentive to come to class?
- Those who come to class are given extra points.
  - Those who do not come to class have their grades reduced.
  - Those who come to class will be asked questions, and if they answer them incorrectly, their grades will be lowered.
  - Those who come to class will be ridiculed.
  - Those who do not come to class might be dropped from the course.

ANS: A                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

34. Actions and activities are discouraged with
- positive incentives.
  - negative incentives.
  - direct incentives.
  - indirect incentives.
  - unintended consequences.

ANS: B                      DIF: Easy                      REF: Incentives              OBJ: 1.2  
 MSC: Remembering

35. A camera takes pictures of drivers who do not stop at a red light, and this practice is used to issue traffic tickets. These red light cameras can be understood as serving a(n)
- positive incentive to encourage individuals to stop at a red light.
  - negative incentive to discourage individuals from driving through a red light.
  - indirect incentive to encourage individuals to stop at a red light.
  - direct incentive to encourage individuals to stop at a red light.
  - negative incentive to encourage individuals to drive through a red light.

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

36. The government places warnings on cigarette and liquor packages. These warnings serve as a(n)
- positive incentive.
  - negative incentive.
  - indirect incentive.
  - opportunity cost.
  - way to make cigarettes and liquor more scarce.

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

37. When a ticket is given to a pedestrian for jaywalking, what type of incentive exists?
- positive
  - negative
  - neutral
  - complementary
  - unintended

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

38. Google has started a project to scan all books and make those that are not copyrighted available to people free of charge. Why is it important that only books without a copyright are available?
- If all books were scanned and available free of charge, copyright holders would face a positive incentive to continue writing and publishing books.
  - If all books were scanned and available free of charge, copyright holders would face a negative incentive to continue writing and publishing books.
  - If only copyrighted texts were scanned and available free of charge, copyright holders would face an indirect incentive to continue writing and publishing books.
  - If only non-copyrighted books were scanned and available free of charge, copyright holders would face a negative incentive to continue writing and publishing books.
  - If only non-copyrighted books were scanned and available free of charge, copyright holders would face an indirect incentive to continue writing and publishing books.

ANS: B                      DIF: Difficult                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

39. The U.S. federal government offers homeowners a tax deduction for their home loan interest payments. This reduction in taxes serves as a(n) \_\_\_\_\_ incentive to buy a house.
- direct
  - indirect
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

40. In a growing number of cities, stores are required either not to make available plastic or paper bags or to do so only for an additional fee. What kind of incentive is this fee?
- direct
  - indirect
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

41. In a growing number of cities, stores are required either not to make available plastic or paper bags or to do so only for an additional fee. If this fee can be refunded when someone recycles the bag, the refund acts as a(n) \_\_\_\_\_ incentive.
- direct
  - indirect
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

42. If Alexander doesn't like changing the oil in his car and pays his father to do it for him, he has provided his father with a(n) \_\_\_\_\_ incentive.
- direct
  - indirect
  - neutral
  - complementary
  - unintended

ANS: A                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying



43. A health insurance company may offer its policyholders a discount on their premiums if they prove that they have stopped smoking. What type of incentive is the health insurance company offering?
- a. direct
  - b. indirect
  - c. neutral
  - d. complementary
  - e. unintended

ANS: A                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

44. Indirect incentives create \_\_\_\_\_ consequences.
- a. positive
  - b. negative
  - c. indirect
  - d. direct
  - e. unintended

ANS: E                      DIF: Easy                      REF: Incentives              OBJ: 1.2  
 MSC: Remembering

45. The government controls for some indirect incentives in safety net social programs by
- a. limiting payment to a specified time period.
  - b. providing only a partial payment.
  - c. allowing individuals to apply to only a certain number of safety net social programs.
  - d. requiring individuals to repay the benefits they received.
  - e. establishing income limits for those who apply for safety net social programs.

ANS: A                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Remembering

46. What is the indirect incentive in the unemployment insurance program?
- a. Workers get paid when they are laid off.
  - b. Workers face an incentive to find a new job as quickly as possible.
  - c. Workers have a reduced incentive to find a new job until the insurance runs out.
  - d. Workers are paid all of their wages by the unemployment insurance program.
  - e. Workers on unemployment insurance are given training opportunities.

ANS: C                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Understanding

47. The U.S. federal government offers homeowners a tax deduction for their home loan interest payments. This reduction in taxes may have encouraged too many people to own homes. If the tax deduction caused people who otherwise would have rented to own, the tax deduction serves as a(n) \_\_\_\_\_ incentive.
- a. direct
  - b. indirect
  - c. neutral
  - d. complementary
  - e. unintended

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
 MSC: Applying

48. Although generous disability insurance can help those who have been permanently injured, it can also increase the likelihood that individuals will falsely claim to be disabled. This likelihood is a(n)
- direct incentive.
  - indirect incentive.
  - positive incentive.
  - innovation.
  - marginal cost.

ANS: B                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
 MSC: Applying

49. The government has been trying to encourage the use of fuel-efficient cars. One way it has been doing this has been by allowing fuel-efficient cars to use a separate highway lane. This encourages people to use fuel-efficient cars because
- those who place a high value on their scarce time may be encouraged to buy a fuel-efficient car to take advantage of the separate highway lane.
  - those who place a low value on their scarce time may be encouraged to buy a fuel-efficient car to take advantage of the separate highway lane.
  - those who are more concerned about the environment are also those who happen to place a high value on their time.
  - those who purchase a fuel-efficient car are forced to pay more for a new car, and the use of the separate highway lane compensates them for this.
  - those who purchase a fuel-efficient car are likely to be unhappy because it is less powerful or more cramped inside; use of the separate highway lane compensates them for this.

ANS: A                      DIF: Difficult                      REF: Trade-offs                      OBJ: 1.2  
 MSC: Applying

50. In the area of many college campuses, parking spaces are often scarce. If these parking spaces have parking meters, which population described below would pay for parking?
- those that are willing to take risks and believe that they will not be caught if they don't place change in the meter
  - those that place a high opportunity cost on making sure they have change and placing change in the meter
  - those that are willing to take risks, believe that they will not be caught if they don't place change in the meter, and disregard any possible \$5 ticket for parking illegally
  - those that are unwilling to take risks and believe there is a high chance that they will not be caught if they don't pay for parking
  - those that are unwilling to take risks, believe there is a high chance that they will be caught if they don't pay for parking, and place a high value on doing the "right" thing

ANS: E                      DIF: Difficult                      REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying

51. Some public transit systems use an “honor system” whereby patrons have to show that they have paid their fare only when asked for it by an enforcement officer. With what population would such a system be successful?
- a population that is willing to take risks and whose people believe that they will not be caught if they don't pay their fare
  - a population that places a high opportunity cost on taking time to purchase a ticket
  - a population whose people are willing to take risks, believe that they will not be caught if they don't pay their fare, and treat fines for not paying a fare as a nuisance
  - a population that is unwilling to take risks and whose people believe there is a high chance that they will be caught if they don't pay their fare
  - a population whose people are unwilling to take risks, believe there is a high chance that they will not be caught if they don't pay their fare, and place a low value on doing the right thing

ANS: D                      DIF: Difficult              REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying

52. Rational decision making under conditions of scarcity requires individuals to
- place a monetary value on everything.
  - know the prices of all goods they might buy.
  - be alert to price reductions on desired products.
  - understand that trade-offs are necessary.
  - earn as much income as possible.

ANS: D                      DIF: Moderate              REF: Trade-offs              OBJ: 1.2  
 MSC: Understanding

53. Economics is concerned with the trade-offs that emerge because of scarcity. The term “trade-offs” refers to
- the decision about whether households or businesses should bear the entire burden of the scarcity problem.
  - the buying and selling that occur as unwanted goods are exchanged for goods that are desired.
  - the alternatives given up when making choices.
  - recycling and transforming old goods into new goods to reduce scarcity problems.
  - forcing businesses to produce some goods and services and not others.

ANS: C                      DIF: Moderate              REF: Trade-offs              OBJ: 1.2  
 MSC: Understanding

54. What is the opportunity cost of taking an exam?
- all of the things that someone could have done by not studying
  - each of the questions that someone misses on the exam
  - the highest valued alternative that someone gave up to prepare for and attend the exam
  - the money someone spent purchasing the textbook and the other materials with which he or she studies
  - the money someone spent on tuition

ANS: C                      DIF: Moderate              REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying

55. Kelly is an architect, and she is trying to decide whether to hire Lawrence, a draftsman, to assist with her work. Kelly could hire Lawrence at \$20 per hour, but it would take him three times as long to complete a task as it takes Kelly. Kelly is able to earn \$90 per hour and has more architectural jobs than she is able to handle. Which of the following is true?
- Kelly should not hire Lawrence because it would be faster for her to do the work herself.
  - Kelly should do the drafting work herself because she has the lower opportunity cost.
  - Lawrence should be hired at the \$20 per hour wage rate.
  - Lawrence should be hired, but only if he is paid more than \$30 per hour.
  - Kelly should hire someone who earns minimum wage instead of Lawrence.

ANS: C                      DIF: Difficult                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Analyzing

56. The cost of a trade-off is known as the \_\_\_\_\_ cost of that decision.
- marginal
  - net
  - opportunity
  - comparative
  - explicit

ANS: C                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Understanding

57. Opportunity cost is the \_\_\_\_\_ alternative forfeited when a choice is made.
- least-valued
  - highest-valued
  - most recently considered
  - most convenient
  - first

ANS: B                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Remembering

58. An opportunity cost is the
- lowest possible cost.
  - highest possible cost.
  - monetary price paid for a good or service.
  - cost of a purchase or decision as measured by what is given up.
  - cost of finding the lowest price for a product.

ANS: D                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Understanding

59. The opportunity cost of a purchase is
- zero if the item is what someone wants most.
  - always equal to the selling price of what someone purchased.
  - always greater for people who are out of work than for people who are working.
  - the alternative good or service that one sacrifices because a different good was purchased.
  - the lowest possible price.

ANS: D                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Understanding

60. An opportunity cost
- a. can be measured only when the decision involves expenditures of money.
  - b. can be measured only when the decision involves spending time on one thing and not on another.
  - c. is impossible to measure.
  - d. is equal to the value of what is given up to make a purchase or take an action.
  - e. exists for every decision made by individuals and businesses, but not by the government.

ANS: D                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Understanding

61. The trade-offs that are made because of scarcity
- a. are important in developing economies, but they do not apply to developed economies.
  - b. are important in developed economies, but they do not apply to developing economies.
  - c. are different when they involve the wants of people, but they are similar when they involve the needs of people.
  - d. can be accurately made to the extent that they can be quantified.
  - e. depend on the decision maker's value judgments about the relative importance of the alternatives.

ANS: E                      DIF: Moderate                      REF: Trade-offs                      OBJ: 1.2  
MSC: Understanding

62. How are changes in opportunity cost related to decision-making behavior?
- a. The lower the opportunity cost of doing activity X, the more likely activity X will be done.
  - b. The higher the opportunity cost of doing activity X, the more likely activity X will be done.
  - c. Changes in the opportunity cost play no role in decision making.
  - d. The lower the opportunity cost of doing activity Y, the more likely activity X will be done.
  - e. The higher the opportunity cost of doing activity Y, the less likely activity X will be done.

ANS: A                      DIF: Difficult                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Understanding

63. Nicole asked her neighbor to rake the leaves on his lawn because they were blowing into her yard. It takes an hour to rake the yard, regardless of who performs the task. He responded that it wouldn't be rational for him to do so, but he would be willing to hire someone else to rake. Why would this be the case?
- Her neighbor lacks the equipment to rake leaves and thinks it would take too long to do the job.
  - Her neighbor is a busy person and doesn't have time to rake leaves.
  - Her neighbor is getting revenge on her because Nicole didn't rake the leaves on her lawn last year.
  - Her neighbor is a lawyer who values his time at \$200 an hour and knows that he can hire a high school kid to rake leaves for \$20 an hour.
  - Her neighbor is a high school teacher and values his time at \$15 an hour, and he knows that he can hire one of his students to rake leaves for \$20 an hour.

ANS: D                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

64. Instead of taking an economics course, Adam could have taken a history course that meets at the exact same time. The total cost of taking the economics course would be
- the tuition cost for the economics course.
  - the fact that Adam could not take the history course at the same time.
  - the tuition cost for the economics course plus the price of the textbook and a notebook for the economics course.
  - the tuition cost, the cost of the textbook and notebook, and the fact that Adam could not take the history course at the same time.
  - the price of the textbook and a notebook for the economics course.

ANS: D                      DIF: Difficult              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

65. The opportunity cost for Jeremiah of going to a water park is
- the price of the admission pass.
  - zero, if he can go with his parents who will pay.
  - zero, if it is raining that day and the water park is closed.
  - the price of the admission pass plus the highest valued alternative activity Jeremiah could have done instead.
  - the highest valued alternative activity Jeremiah could have done instead.

ANS: E                      DIF: Difficult              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

66. Why would economists find it surprising if the CEO of a large company does his or her own housework?
- The opportunity cost of a CEO's time is quite high because they have an abundance of time to spend on housework.
  - The opportunity cost of a CEO's time is quite low because they have a scarcity of time to spend on housework.
  - The opportunity cost of a CEO's time is quite low because they have an abundance of time to spend on housework.
  - The opportunity cost of a CEO's time is quite high because they have a scarcity of time to spend on housework.
  - The opportunity cost of a CEO's time is equal to that of everyone else that works at the same company.

ANS: B                      DIF: Moderate              REF: Opportunity Cost

OBJ: 1.2                      MSC: Applying

67. The opportunity cost of going to school rather than working is the cost of
- food.
  - housing.
  - clothing.
  - health care.
  - potential wages.

ANS: E                      DIF: Moderate              REF: Opportunity Cost

OBJ: 1.2                      MSC: Applying

68. The opportunity cost of working rather than going to school is
- the cost of food and housing.
  - the cost of clothing and transportation.
  - zero because the person is earning an income by working.
  - the higher wages that come with additional education.
  - the annual wages earned by working.

ANS: D                      DIF: Moderate              REF: Opportunity Cost

OBJ: 1.2                      MSC: Applying

69. When Lucy chose a major, she likely thought about her skills. Let's say Lucy doesn't enjoy dealing with numbers. How could she explain to her parents, using logic from economics, why she chose to major in English instead of mathematics?
- The opportunity cost of learning mathematics is too high.
  - The opportunity cost of learning to appreciate literature is too high.
  - The expected value of a major in English after graduation is low.
  - The expected value of a major in mathematics after graduation is high.
  - The opportunity cost of going to college is too low.

ANS: A                      DIF: Moderate              REF: Opportunity Cost

OBJ: 1.2                      MSC: Applying

70. Restaurants, bars, and convenience stores are often located near college campuses. These businesses frequently charge higher than normal prices. They are taking advantage of the fact that students
- are able to pay higher prices than the rest of the population, so the businesses can charge higher prices than they otherwise would have been able to charge.
  - are unable to pay higher prices than the rest of the population, but they are able to succeed because they can sell to a large number of people.
  - place a high value on their scarce time and are willing to pay higher prices than they would at locations farther from campus.
  - place a low value on their scarce time and are willing to pay higher prices than they would at locations farther from campus.
  - place a high value on their scarce time and are unwilling to pay higher prices.

ANS: C                      DIF: Moderate              REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying

71. The government has been considering doing away with minting pennies because they are rarely used for purchases (with most people collecting them or throwing them away). How would an economist best explain this consumer behavior?
- More people are using credit and debit cards, so they are not in the habit of using monetary change.
  - Prices have increased over time, and it would take far too many pennies to buy anything of value.
  - Prices have increased over time, and the opportunity cost of carrying around large quantities of pennies has become too large.
  - Prices have increased over time, and the opportunity cost of carrying around pennies has fallen.
  - People who use pennies probably aren't spending enough money; removing the penny will force people to spend more.

ANS: C                      DIF: Moderate              REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying

72. The government has been trying to mint dollar coins instead of printing paper dollar bills, but people have been reluctant to use coins instead of paper bills. How would an economist explain this reluctance?
- More people are using credit and debit cards, so people are not accustomed to using change.
  - Retailers find it too expensive to deal with coins and would have to raise their prices if consumers used coins more.
  - The opportunity cost of carrying around large quantities of coins is too large.
  - Prices have increased over time, and the opportunity cost of carrying around a large number of coins would be low.
  - People who receive a dollar coin are more likely to collect than spend the money, and the economy won't grow as quickly because less is being spent.

ANS: C                      DIF: Moderate              REF: Opportunity Cost  
 OBJ: 1.2                      MSC: Applying



73. According to economists, one reason few professional athletes have PhD's is that the
- opportunity cost of going to graduate school is too high.
  - marginal benefit of going to graduate school is too high.
  - marginal cost of going to graduate school is too high.
  - comparative cost of going to graduate school is too high.
  - explicit cost of going to graduate school would be too high.

ANS: A                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

74. Economists believe that individuals compare the benefits and costs of various options when making decisions and in so doing act

- fairly.
- selfishly.
- collectively.
- unpredictably.
- rationally.

ANS: E                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

75. The term \_\_\_\_\_ means "additional."

- marginal*
- comparative*
- incentive*
- opportunity cost*
- trade-off*

ANS: A                      DIF: Easy                      REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

76. Economists believe that optimal decisions are made up to the point where

- marginal benefit is zero.
- marginal cost is zero.
- marginal benefits are greater than marginal costs.
- marginal costs are greater than marginal benefits.
- marginal benefits are equal to marginal costs.

ANS: E                      DIF: Difficult              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Analyzing

77. An activity's marginal benefit is \_\_\_\_\_ at the optimal quantity.

- zero
- greater than zero
- less than zero
- equal to the marginal cost
- greater than the marginal cost

ANS: D                      DIF: Difficult              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Analyzing

78. When most economists wake up in the morning, their first decision is whether to hit the snooze bar on the alarm clock. What statement best represents their thought process as rational decision makers?
- Sal had a really late night grading exams, and he deserves 10 more minutes of sleep.
  - The total amount of work Sal has to do today is rather small, so the total benefit to going to work for a full eight hours is also small.
  - The total amount of work Sal has to do today is rather small, so the marginal cost of going to work 10 minutes late is small.
  - The total amount of work Sal has to do today is rather small, so the marginal benefit of sleeping 10 more minutes is rather large.
  - The marginal benefit of sleeping 10 more minutes is greater than the marginal benefit of 10 more minutes of work.

ANS: E                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Applying

79. One way to promote a new business is to offer free items. If Jayleen were to open a restaurant and offer free food, she likely would have a line out the door. How would an economist understand the behavior of those standing in line?
- Those waiting in line place a high value on the use of their time.
  - Those waiting in line believe that the marginal cost of waiting in line exceeds the marginal benefit of waiting in line.
  - Those waiting in line place a low value on the use of their time.
  - Those waiting in line believe that the marginal cost of waiting in line is zero.
  - Those waiting in line believe that the marginal benefit of waiting in line is zero.

ANS: C                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Applying

80. Instead of deciding to finish high school, Cecily could have decided to work full-time. How would an economist explain her decision to receive her high school degree?
- The cost of going to high school was greater than the benefit of working full-time.
  - The benefit of working full-time was greater than the benefit of going to high school.
  - The benefit of going to high school was greater than the benefit of working full-time.
  - The cost of working full-time was greater than the benefit of going to high school.
  - The benefit of working full-time was greater than the cost of going to high school.

ANS: C                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Applying

81. Many stores are open 24 hours a day. When store managers make the decision to stay open 24 hours, it must be the case that
- the marginal benefit of staying open all day and the marginal cost to remaining open all day are at least equal.
  - the marginal benefit of staying open all day must always be greater than the marginal cost to remaining open all day.
  - the marginal cost of staying open all day must always be greater than the marginal benefit to remaining open all day.
  - the calculation of marginal benefits or marginal costs of remaining open all day plays no role.
  - the marginal benefit of remaining open all day is zero.

ANS: A                      DIF: Moderate              REF: Marginal Thinking  
 OBJ: 1.2                      MSC: Applying

82. In 2009, the federal government created a program called Cash for Clunkers whereby consumers could trade in a less efficient car for a more efficient car and receive a higher value than they would have otherwise. How would an economist understand the decision that consumers faced?
- Consumers would compare the marginal benefits to the marginal costs of replacing their cars, and this program made sure that marginal benefits would exceed marginal costs.
  - Consumers would compare the marginal benefits to the marginal costs of replacing their cars, and this program made sure that marginal costs would exceed marginal benefits.
  - The Cash for Clunkers program increased the opportunity cost of replacing a car.
  - The Cash for Clunkers program served as a negative incentive to replacing a fuel-inefficient car.
  - The Cash for Clunkers program served as an indirect incentive to replacing a fuel-inefficient car.

ANS: A                      DIF: Moderate              REF: Marginal Thinking  
 OBJ: 1.2                      MSC: Applying

83. Who benefits from voluntary trade?
- buyers
  - sellers
  - the government
  - buyers and sellers
  - buyers and the government

ANS: D                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
 MSC: Remembering

84. What creates comparative advantage?
- lower costs
  - higher opportunity costs
  - specialization
  - scarcity
  - population growth

ANS: C                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
 MSC: Remembering

85. Comparative advantage emerges because of the presence of
- trade.
  - differing opportunity costs.
  - marginal benefits that equal marginal costs.
  - scarcity.
  - incentives.

ANS: B                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

86. The opportunity cost to free trade is
- economic growth.
  - government involvement.
  - domestic jobs.
  - lower prices.
  - greater efficiency.

ANS: C                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

87. A person has a comparative advantage in the production of a good when she or he can produce the product at a(n) \_\_\_\_\_ opportunity cost compared to another person.
- higher
  - lower
  - equal
  - diminishing
  - increasing

ANS: B                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

88. When trade is voluntary, who benefits?
- the seller
  - the buyer
  - No one benefits.
  - both the buyer and the seller
  - Trade is never voluntary.

ANS: D                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

89. More oranges are grown in Florida than North Dakota because Florida's warm climate gives it a \_\_\_\_\_ advantage in growing oranges.
- comparative
  - public
  - revenue
  - producer
  - planning

ANS: A                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
MSC: Applying

90. The United States is able to experience economic growth to the extent that
- specialization and trade are encouraged.
  - the government involves itself in the economy.
  - trade is restricted.
  - jobs are protected from outsourcing.
  - consumers are encouraged to buy domestically produced goods.

ANS: A                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
MSC: Understanding

91. Saudi Arabia has a comparative advantage in producing oil because it
- has specialized in the production of oil given its natural resources.
  - has forced other countries not to sell their oil.
  - has specialized in the production of all goods.
  - forces the use of oil for the production of all electricity.
  - benefits from the heavy use of oil for transportation.

ANS: A                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Applying

92. According to economic thinking, the presence of scarcity requires
- incentives.
  - choices.
  - intelligence.
  - a dismal outlook.
  - unintended consequences.

ANS: B                      DIF: Easy                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

93. The allocation of limited resources within an environment of almost unlimited wants is the focus of
- capitalism.
  - fiscal policy.
  - economics.
  - scarcity.
  - altruism.

ANS: C                      DIF: Easy                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

94. An economist is most capable of determining
- how worker productivity affects the output of an economy.
  - psychological factors that contribute to worker productivity.
  - interior paint colors that boost business revenue.
  - which individuals are allowed to make decisions.
  - why some consumers prefer emeralds over diamonds.

ANS: A                      DIF: Moderate              REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

95. Without scarcity, the study of \_\_\_\_\_ would be unnecessary.
- positive incentives
  - negative incentives
  - resource allocation
  - economics
  - productivity

ANS: D                      DIF: Easy                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Understanding

96. Low prices for water in the developed world may lead individuals to believe it is NOT a \_\_\_\_\_ resource.
- desired
  - scarce
  - plentiful
  - controlled
  - economic

ANS: B                      DIF: Easy                      REF: What Is Economics?  
OBJ: 1.1                      MSC: Applying

97. A recession has crippled the national economy, producing a high rate of unemployment. Which of the following would be a microeconomic decision?
- Congress decides to institute a tax cut and encourage consumer spending.
  - The United States negotiates a new trade agreement with Japan, hoping to bolster exports.
  - The federal government extends the duration of unemployment benefits.
  - A Congresswoman decides to delay the purchase of a new car.
  - The Federal Reserve lowers interest rates in an effort to stimulate business activity.

ANS: D                      DIF: Easy                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Applying

98. Which is NOT one of the five foundations of economics?
- innovation
  - incentives
  - trade-offs
  - opportunity cost
  - marginal thinking

ANS: A                      DIF: Easy                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Remembering

99. Macroeconomics would be concerned with
- a family's decision to finance the purchase of a home.
  - the consequence of a massive layoff by a major corporation.
  - a local government issuing bonds to build a new sporting arena.
  - a single national government choosing to implement trade tariffs.
  - the opening of an auto plant in a county with high unemployment.

ANS: D                      DIF: Moderate                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Applying

100. Decisions by individuals and firms are the domain of
- microeconomics.
  - macroeconomics.
  - consumption economics.
  - median economics.
  - choice economics.

ANS: A                      DIF: Easy                      REF: Microeconomics and Macroeconomics  
OBJ: 1.1                      MSC: Applying

101. Why do incentives matter to economists?
- People make poor decisions when they're given money they didn't earn.
  - Governments are the source of all incentives and there is value in studying the actions of government.
  - Incentives are often the guiding principle behind greed and exploitation.
  - Incentives explain how people make decisions, and are the key to understanding economics.
  - Without incentives, the distinction between microeconomics and macroeconomics would be unclear.

ANS: D                      DIF: Easy                      REF: Incentives                      OBJ: 1.2  
MSC: Understanding

102. When an individual chooses to act, he or she is said to be motivated by
- a. scarcity.
  - b. incentives.
  - c. disincentives.
  - d. indifference.
  - e. ambivalence.

ANS: B                      DIF: Easy                      REF: Incentives                      OBJ: 1.2  
MSC: Remembering

103. A mother takes her daughter on an outing and promises her ice cream if she behaves. In addition, she warns her that if she misbehaves, she won't be allowed to play with her toys at home. The latter is an example of a(n) \_\_\_\_\_ incentive and reinforces the efficacy of the ice cream, a(n) \_\_\_\_\_ incentive.
- a. direct; indirect
  - b. indirect; direct
  - c. negative; positive
  - d. positive; negative
  - e. negative; direct

ANS: C                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

104. Hassan enjoys lifting weights in his spare time, but his gain in strength has come to a plateau. He is considering giving up weight lifting altogether, unless he experiences significant gains in the near future. Hassan is seeking a \_\_\_\_\_ incentive.
- a. power
  - b. reasonable
  - c. negative
  - d. positive
  - e. neutral

ANS: D                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

105. Clarice must choose between reading the next chapter in her economics textbook or streaming the next episode of her favorite show. In her experience, she does well on exams, but even better when she reads the textbook. If she chooses to watch the show, what can be said of incentives?
- a. Adding a negative incentive (e.g., her parents block access to streaming services) would more likely result in Clarice choosing to read the textbook.
  - b. Positive incentives are always more effective than negative incentives.
  - c. Negative incentives are always more effective than positive incentives.
  - d. Only marginal incentives play a role in this example.
  - e. Clarice is motivated by the stronger of two negative incentives.

ANS: A                      DIF: Moderate                      REF: Incentives                      OBJ: 1.2  
MSC: Applying

106. A new tax on gasoline causes a reduction in the purchase of new vehicles with poor fuel economy. This is an example of what type of incentive?
- a. negative direct
  - b. positive direct
  - c. negative indirect
  - d. positive indirect
  - e. The tax does not provide an incentive.

ANS: C                      DIF: Difficult                      REF: Incentives                      OBJ: 1.2  
MSC: Analyzing

107. Which of the following is an example of an unintended consequence?
- Competition between two businesses causes each to lower prices.
  - A tax rebate on electric cars results in increased household electricity consumption.
  - A tax cut leads to a spike in consumer spending.
  - Low interest rates encourage businesses to borrow money from banks.
  - A welfare program causes individuals to purchase necessities and seek employment.

ANS: B                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

108. The \_\_\_\_\_ system encourages innovation by creating a powerful financial reward for creativity.
- direct incentive
  - indirect incentive
  - patent
  - trade-off
  - tax credit

ANS: C                      DIF: Easy                      REF: Incentives              OBJ: 1.2  
MSC: Remembering

109. Corporate leadership sometimes waits until after presidential elections in order to make major business decisions. An economist would maintain that this is in anticipation of future
- forecasting.
  - fear.
  - scarcity.
  - incentives.
  - taxes.

ANS: D                      DIF: Moderate              REF: Incentives              OBJ: 1.2  
MSC: Applying

110. The proliferation of BitTorrent and other file sharing media have threatened the copyright system. Based on an understanding of incentives and opportunity cost, how are the decisions of musicians likely impacted?
- They will spend more time in court, reducing the amount of music they produce.
  - They will illegally download the music of other artists to balance the impact across the industry.
  - Since music theft cannot be stopped, musicians will stop trying to sell their music.
  - Most musicians will be forced to take a second job in order to support themselves.
  - If more money can be made in alternative professions, individuals will choose not to pursue music.

ANS: E                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Analyzing

111. The concept of \_\_\_\_\_ explains that making one choice means an individual will not have the time, resources, or energy to do something else.
- scarcity
  - negative incentives
  - trade-offs
  - opportunity cost
  - marginal benefit

ANS: C                      DIF: Easy                      REF: Trade-offs              OBJ: 1.2  
MSC: Remembering



112. Trade-offs occur in all of the following scenarios EXCEPT
- a student has two exams on the following day and must divide study time between the classes.
  - a couple chooses between two equally appealing vacation destinations for the following weekend.
  - a shopper wants to buy two equally appealing shirts totaling \$50, and has \$35 to spend on each.
  - a caterer selects from two potential jobs, both paying \$2,500 on a Saturday night.
  - consumers are often forced to make a compromise between quality and price.

ANS: C                      DIF: Moderate              REF: Trade-offs              OBJ: 1.2  
MSC: Applying

113. During a job search, individuals will sometimes accept the lower of two competing salary offers. What would best explain this decision?
- Individuals never accept a salary that exceeds their personal values.
  - A person may accept a lower starting salary in order to receive greater future pay increases.
  - The total benefits of the higher paying job are greater than the total benefits of the lower paying job.
  - The total benefits of the lower paying job are greater than the total benefits of the higher paying job.
  - The lower salary is still better than the salary earned at the previous job.

ANS: D                      DIF: Moderate              REF: Trade-offs              OBJ: 1.2  
MSC: Analyzing

114. The presence of scarcity means that no choices come without
- shortages.
  - trade-offs.
  - regret.
  - incentives.
  - consumption.

ANS: B                      DIF: Moderate              REF: Trade-offs              OBJ: 1.2  
MSC: Analyzing

115. Laura leaves her job as an accountant, where she earns \$80,000 per year, to start her own business. After the first year, her business earns a profit of \$60,000. How would an economist describe the profitability of Laura's career change?
- Laura had a profit of \$140,000.
  - Laura had a loss of \$20,000.
  - Laura had a profit of \$20,000.
  - Laura had a profit of \$60,000.
  - Laura had a loss of \$80,000.

ANS: B                      DIF: Difficult              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

116. Dexter decides to buy a new smartphone and offset the cost by selling his old phone to one of his friends. His friend has no money and wants to barter for the old phone. Dexter's preference for the items offered is in this order: laser printer, television, headphones, and bicycle. If Dexter accepts the laser printer as payment, what is his opportunity cost of this exchange?
- the total value of the television, headphones, and bicycle
  - the difference between the value of the old phone and that of the new smartphone
  - There is no opportunity cost in a consensual trade.
  - the value of the laser printer
  - the value of the television

ANS: E                      DIF: Difficult              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

117. Isaac has four potential jobs to consider, each with different salary offers. From highest to lowest, the salaries are: \$47,500, \$46,000, \$45,000, and \$42,000. Based on the information provided, if Isaac accepts the highest-paying position, what is his opportunity cost of this position?
- \$46,000
  - \$42,000
  - \$47,500
  - \$133,000
  - \$1,500

ANS: A                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

118. Which statement represents a rational application of opportunity cost?
- The value of the choice must be greater than or equal to the cost of the next-best alternative.
  - The value of the next-best alternative must be greater than or equal to the cost of the choice.
  - Opportunity cost is useful for evaluating a decision after the fact, but not during the decision-making process.
  - The value of the choice must be greater than the sum of all available alternatives.
  - The value of the next-best alternative is irrelevant since the alternative was not selected.

ANS: A                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

119. What is NOT a possible opportunity cost of attending a four-year college following high school graduation?
- the experience of traveling throughout Europe and staying in hostels
  - the income earned at a full-time job
  - the cost of tuition at a four-year college
  - job training learned at a vocational school
  - the cost savings from attending a community college

ANS: C                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

120. What is the opportunity cost of purchasing a college textbook?
- the price paid at the university bookstore
  - the cost savings from not purchasing a book
  - the prospect of failing homework assignments and quizzes
  - the trade-in value at the end of the semester
  - the cost of the course minus the cost of the textbook

ANS: B                      DIF: Moderate              REF: Opportunity Cost  
OBJ: 1.2                      MSC: Applying

121. An economist would argue that the true cost of a college education exceeds the cost of tuition, housing, and books because of
- opportunity cost.
  - invisible costs.
  - inflation.
  - tax credits.
  - scholarships.

ANS: A                      DIF: Easy                      REF: Opportunity Cost  
OBJ: 1.2                      MSC: Remembering

122. Marginal decisions are said to be made on the \_\_\_\_\_ unit(s) under consideration.
- total
  - additional
  - average of
  - sum of
  - previous

ANS: B                      DIF: Easy                      REF: Marginal Thinking  
OBJ: 1.2                      MSC: Remembering

123. \_\_\_\_\_ is the process of breaking down decisions into smaller parts.
- Economics
  - Marginal analysis
  - Divisional analysis
  - Segmentation
  - Reduction

ANS: B                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Remembering

124. According to marginal thinking, an individual will continue to consume until after the benefit of additional consumption \_\_\_\_\_ its cost.
- is equal to
  - totals
  - is greater than
  - is less than
  - marginalizes

ANS: D                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

125. \_\_\_\_\_ is value added by making additional effort.
- Income
  - Money
  - Marginal benefit
  - Optimization
  - Opportunity benefit

ANS: C                      DIF: Easy                      REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

126. Shoppers at supermarkets often abandon their empty shopping carts at various locations in the parking lot, despite the risk of damage to vehicles or the additional labor cost of retrieving those carts. How might an economist explain this behavior?
- People go to the supermarket when they have the energy to shop only, without considering the cost of returning their carts.
  - The perceived potential benefit of going to a cart return location is less than the time and energy cost to the shopper.
  - People are generally lazy and gravitate toward any decision with the lowest cost.
  - Once a shopper leaves the parking lot, the abandoned cart becomes someone else's problem.
  - Because food prices are always subsidized by the government, shoppers are ignorant of additional costs.

ANS: B                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

127. Rodrigo operates a dry-cleaning service and charges customers \$5 per article of clothing. Based on his knowledge of operations, the 1,000th piece of clothing costs him \$4.95 to dry-clean. If he takes additional business, however, the 1,001st piece will cost \$5 for the service. Does he take the additional business?
- No, he has hidden costs that far exceed his estimate of \$5, so he loses money.
  - No, taking on additional business doesn't earn him any money.
  - Yes, if he turns away business, his service will be forced to close.
  - Maybe. If a competitor is accepting that many customers, he must at least equal that amount.
  - Yes. At a \$5 cost, he breaks even and is indifferent. He necessarily turns away business when the cost of the additional unit exceeds the income.

ANS: E                      DIF: Difficult              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Analyzing

128. People often clean cabinet doors, but do not regularly clean inside the cabinet. The insides of cabinets aren't visible and require the removal of contents in order to clean. This is an example of \_\_\_\_\_ thinking.
- conscientious
  - deferential
  - dismal
  - incentive
  - marginal

ANS: E                      DIF: Easy                      REF: Marginal Thinking  
OBJ: 1.2                      MSC: Understanding

129. At any quantity, when the marginal benefit equals the marginal cost, that quantity is said to be
- excessive.
  - inadequate.
  - optimal.
  - equivalent.
  - allocated.

ANS: C                      DIF: Moderate              REF: Marginal Thinking  
OBJ: 1.2                      MSC: Analyzing

130. It is crucial to recognize that \_\_\_\_\_ and \_\_\_\_\_ are separate evaluations made at the margin.
- a. costs; benefits
  - b. buying; selling
  - c. incentives; trade-offs
  - d. economics; accounting
  - e. trade-offs; opportunity costs

ANS: A                      DIF: Moderate      REF: Marginal Thinking  
 OBJ: 1.2                    MSC: Remembering

131. The U.S. federal government imposes a tariff on cheaper steel arriving from other countries. When producers make the decision to purchase domestic steel, what must first occur?
- a. Producers always purchase domestic steel because the quality is superior to foreign products.
  - b. The price of domestic steel must be at least equal to or greater than that of foreign steel.
  - c. Producers never purchase domestic steel because it can't be produced as efficiently as foreign products.
  - d. The government must subsidize the manufacturing costs of domestic steel.
  - e. The price of foreign steel must be at least equal to or greater than that of domestic steel.

ANS: E                      DIF: Moderate      REF: Marginal Thinking  
 OBJ: 1.2                    MSC: Applying

132. Decision makers engage in marginal thinking by
- a. comparing the average cost and benefit of all units produced.
  - b. comparing the sum of the cost and benefit of all units produced.
  - c. ignoring benefits, which are a subjective determination.
  - d. comparing the benefit of one additional unit with its cost to produce.
  - e. focusing on mass production, which often keeps costs down.

ANS: D                      DIF: Easy              REF: Marginal Thinking  
 OBJ: 1.2                    MSC: Understanding

133. \_\_\_\_\_ show(s) how resources and final goods and services flow through the economy.
- a. Money
  - b. Government
  - c. Allocation
  - d. Trade-offs
  - e. Circular flow

ANS: E                      DIF: Easy              REF: Trade              OBJ: 1.2  
 MSC: Remembering

134. A double coincidence of wants means that
- a. each party in an exchange transaction has what the other party desires.
  - b. one party in an exchange transaction wants twice what the other party is offering.
  - c. both parties desire the same good or service, making exchange impossible.
  - d. desires in the marketplace are always unpredictable, so it takes at least two exchanges for every market participant to be satisfied.
  - e. both parties in an exchange have a desire, but no means by which to pay for it.

ANS: A                      DIF: Easy              REF: Trade              OBJ: 1.2  
 MSC: Remembering

135. \_\_\_\_\_ avoids the double coincidence of wants.

- a. Bartering
- b. Mandated trade
- c. Government ownership
- d. Money
- e. Demand

ANS: D                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

136. \_\_\_\_\_ involves individuals trading goods they already have or providing services in exchange for something they want.

- a. Circular flow model
- b. Circular flow model with money
- c. Optimization
- d. Barter
- e. Cash exchange

ANS: D                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

137. Which is NOT a benefit of trade?

- a. reaping the rewards of specialization
- b. creation of value for all parties involved
- c. equivalent gains for all parties involved
- d. improved allocation of resources
- e. More wants are satisfied.

ANS: C                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
MSC: Understanding

138. If specialization and outsourcing can harm domestic workers, why do countries still engage in trade?

- a. Most workers have little influence on politicians and are ignored.
- b. The gains from trade far outweigh the costs, and the economy benefits overall.
- c. Domestic workers can move to a country with a greater need for their skills.
- d. Welfare programs can support unemployed workers.
- e. Shipping companies have a powerful lobby in Congress.

ANS: B                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
MSC: Applying

139. Disparities in opportunity cost among competitors are the cause of

- a. optimization.
- b. comparative advantage.
- c. trade-offs.
- d. command economies.
- e. marginal benefits.

ANS: B                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
MSC: Remembering

140. A possible opportunity cost of NOT engaging in free trade is
- a loss of domestic jobs.
  - a smaller variety of goods and services.
  - higher prices.
  - economic growth.
  - import tariffs.

ANS: D                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Understanding

141. A nation will engage in voluntary trade if
- the terms are mutually beneficial for both parties.
  - the trade is approved by the World Trade Center.
  - there are no domestic costs associated with trade.
  - it allows a trade partner to specialize.
  - it lacks a comparative advantage in the production of every good.

ANS: A                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Understanding

142. Coastal regions have stronger commercial fishing economies because they have a \_\_\_\_\_ in the production of seafood.
- comparative advantage
  - proximity advantage
  - rational advantage
  - higher opportunity cost
  - government subsidy

ANS: A                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Understanding

143. William can create 30 meals in one hour, or wash 90 dishes in the same time. Jeremy can create 25 meals in one hour, or wash 50 dishes in one hour. Using opportunity cost, who should specialize in what task?
- William is more productive and therefore should make meals and wash dishes.
  - Since creating meals is harder, William should create meals and wash dishes.
  - Since washing dishes is easier, Jeremy should wash dishes and create meals.
  - Jeremy can wash twice as many dishes per meal, so Jeremy should wash dishes.
  - Jeremy gives up fewer dish washings per meal creation, so Jeremy should create meals.

ANS: E                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Evaluating

144. If the United States creates a trade agreement with Vietnam, we know that
- Vietnam will benefit, but trade with a less developed, Third World country will not help the United States.
  - Vietnam can get no benefit, since its workers are not as productive as the United States'.
  - Vietnam can get no benefit, since its businesses have less capital than the United States'.
  - Vietnam and the United States can both benefit.
  - physical and cultural differences between the two countries are too great to benefit from trade.

ANS: D                      DIF: Moderate              REF: Trade              OBJ: 1.2  
MSC: Understanding

145. Bea bakes pastries well, and Lucian raises great herbs. If Lucian trades parsley with Bea in exchange for cupcakes, then
- both Bea and Lucian are made better off by trade.
  - neither Bea nor Lucian are made better off by trade.
  - only Bea is made better off by trade.
  - only Lucian is made better off by trade.
  - either Bea or Lucian is made better off by trade, but not both.

ANS: A                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
 MSC: Understanding

146. Trade makes costs of goods and services
- lower and raises the variety of goods and services in markets.
  - lower but reduces the variety of goods and services in markets.
  - higher but reduces the variety of goods and services in markets.
  - higher but raises the variety of goods and services in markets.
  - Neither lower nor higher, since so many other variables need to be considered.

ANS: A                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
 MSC: Remembering

147. Choosing to trade \_\_\_\_\_ specialization, \_\_\_\_\_ opportunity costs.
- reduces; reducing
  - reduces; increasing
  - increases; decreasing
  - increases; increasing
  - increases; but doesn't change

ANS: C                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
 MSC: Remembering

148. Wages are higher in Country X than in Country Y. If the countries decide to trade, then who will benefit?
- Neither country can benefit unless one knows the product that is traded.
  - Both countries can benefit regardless of the products traded.
  - Only the country that can produce the product more efficiently will benefit.
  - Only the country that can produce the product at a lower opportunity cost will benefit.
  - Both countries will benefit, but only if a trade agreement for specific products is made by their respective governments.

ANS: D                      DIF: Moderate                      REF: Trade                      OBJ: 1.2  
 MSC: Understanding

149. Benefits from trade would NOT include
- lower prices.
  - less competition.
  - more variety of goods and services in the market.
  - the ability of producers to specialize.
  - more employment for the country.

ANS: B                      DIF: Easy                      REF: Trade                      OBJ: 1.2  
 MSC: Remembering



150. The two highest paid midcareer jobs with only a bachelor's degree are
- business management and accounting.
  - criminal justice and psychology.
  - civil engineering and math.
  - economics and computer engineering.
  - economics and business management.

ANS: D                      DIF: Easy

REF: Economics for Life: Midcareer Earnings by Selected Majors

OBJ: 1.2                      MSC: Remembering

## SHORT ANSWER

1. List and briefly explain each of the five foundations of economic thought.

ANS:

The five foundations of economic thought are incentives, trade-offs, opportunity cost, marginal thinking, and the idea that trade creates value. Incentives encourage or discourage individuals or firms to do certain things and influence their decision-making process. Thinking about trade-offs forces us to think about the costs and benefits to each activity. Once we make a choice about an activity, we have to remember that every activity has an opportunity cost (an alternative activity that we could have done). The comparison of the trade-offs between activities and the opportunity costs associated with them is called marginal thinking. As individuals specialize in the production of goods in which they have a comparative advantage (i.e., face the lowest opportunity costs), there are gains to be had from trade.

DIF: Easy

REF: What Are the Five Foundations of Economics?

OBJ: 1.1

MSC: Understanding

2. Using any of the five foundations of economic thought, explain why farms are not located in major metropolitan areas.

ANS:

In terms of incentives, major metropolitan areas often restrict the types of activities one can do, and farmers would face a negative incentive to locate in a congested area because their neighbors would heavily scrutinize the smells, runoff, and machinery. In a congested area, space is scarce and city planners would likely prefer to have retail and housing rather than farming. City planners would know that there is a trade-off between these activities but would realize that the opportunity cost to farming in the city is too high. Thus, for each acre of land in the city, city planners consider the marginal benefit to having food grown closer to where it is consumed versus the marginal cost to having less housing and fewer retail establishments. In almost all cases, the marginal benefit to having farms closer to the population is less than the marginal cost of having less housing.

DIF: Moderate

REF: What Are the Five Foundations of Economics?

OBJ: 1.1

MSC: Applying

3. Health insurance companies have the goal of reducing payments to doctors and hospitals. One way they have done this is by requiring individuals to pay a deductible. For example, a \$1,000 deductible means that individuals are responsible for the first \$1,000 in health care expenses over the course of a year. In terms of incentives, explain how the presence of a deductible reduces expenses for the health insurance company.

ANS:

Deductibles act as a positive and direct incentive to encourage individuals either to refrain from going to the doctor for a minor ailment or to be responsible in the choices made for the care they receive.

DIF: Moderate      REF: Incentives      OBJ: 1.2      MSC: Applying

4. Economic growth in developed countries has been altered by the increased popularity of the Internet. How has the Internet, in terms of both negative and positive incentives, promoted but also discouraged economic growth?

ANS:

The Internet has certainly done a great deal to encourage economic growth: those who are creative and those who invent things now have a way to sell their products to a larger set of individuals and thus face a positive incentive to sell their work and products over the Internet. The Internet has also made it more convenient to buy things and has provided a positive incentive to consumers to consume more. There has been some discouragement of economic growth through negative incentives provided by the Internet. With the use of the Internet, there has been more theft of digital music, movies, and ideas. These thefts provide a negative incentive for creative and innovative individuals.

DIF: Moderate      REF: Incentives      OBJ: 1.2      MSC: Applying

5. The discipline of economics is largely based on encouraging individuals to engage in certain activities and discouraging them from engaging in others. Why is encouraging or discouraging individuals through incentives so important?

ANS:

Economics as a discipline focuses on how people allocate their scarce resources to satisfy their wants and needs. Due to the fact that individuals are generally free to do what they want, when they want, the only way to get individuals to do what you want is to reward them (either monetarily or nonmonetarily) through a positive incentive or punish them (either monetarily or nonmonetarily) through a negative incentive.

DIF: Easy      REF: Incentives      OBJ: 1.2      MSC: Evaluating

6. A dangerous habit among those who own cell phones is driving while talking or texting. Although a great deal has been done to inform drivers of the risks of doing multiple tasks while driving, this informational campaign has been ineffective in the face of increased ownership of cell phones. If you were a policymaker, what types of negative incentives would you suggest to discourage individuals from driving, talking, and texting at the same time?

ANS:

Some possible answers would include making it illegal to drive and do other things at the same time, and the negative incentive would be avoiding a traffic ticket and fine. Another negative incentive might be setting up cameras to take pictures of people driving and talking on the phone at the same time and making the pictures public. Another negative incentive might be making mandatory the installation in cars of equipment that interferes with a cell phone signal, so that using the phone in the car becomes inconvenient.

DIF: Moderate      REF: Incentives      OBJ: 1.2      MSC: Applying

7. Due to the fact that firms concern themselves primarily with earning profits, a common complaint is that they often damage the environment in the process. More recently, markets have been set up so that firms can actually reduce their costs and profit more by damaging the environment less and selling their “right to pollute” to other companies. Discuss how this serves as a positive incentive for a firm to act in an environmentally responsible manner. What would be a way to discourage firms from polluting through the use of negative incentives?

ANS:

Market environmentalism is a way by which firms can profit by polluting less. As they create less pollution, they can sell their right to pollute to others and thereby capture additional revenue (and perhaps reduce their costs as well because they employ more efficient technology). Firms don’t care directly about preserving the environment. Rather, they are given a positive incentive not to pollute by increasing their profit. The alternative would be to provide a negative incentive not to pollute through the use of fines and government regulations (through an organization like the Environmental Protection Agency).

DIF: Difficult      REF: Incentives      OBJ: 1.2      MSC: Applying

8. What are opportunity costs, and why do economists spend so much time talking about them?

ANS:

The opportunity cost is the highest-valued alternative that one gives up when making a decision to do something else. Economists tend to spend so much time talking about opportunity costs because of scarcity—doing an activity or buying something always means not doing something else or not being able to buy something else.

DIF: Easy      REF: Opportunity Cost      OBJ: 1.2  
MSC: Understanding

9. One of the first major decisions that one faces after graduation is getting an apartment. Describe how someone might employ the concepts of trade-offs, opportunity costs, and making decisions at the margin in deciding which apartment to rent.

ANS:

Apartments have varying sizes, prices, and amenities. Someone who wants a pet, a balcony, hardwood floors, and an elevator may have to pay more rent, get an apartment in a less than desirable location, or get a smaller apartment. Among the variables of size, price, location, and amenities, apartments can then be compared to one another (and trade-offs among these variables identified); the opportunity cost to having a pet, a balcony, hardwood floors, or an elevator can be understood, and the marginal benefits and marginal costs of these variables can be appreciated.

DIF: Moderate      REF: Marginal Thinking      OBJ: 1.2  
MSC: Applying

10. What is meant when one says that decisions are made at the margin? Provide an example of making a decision at the margin.

ANS:

When decisions are made at the margin, one is saying that he or she compares the benefit and the cost to doing something or buying something one more time. All of our decisions involve this marginal analysis. Examples might include how much to study for a course, how much sleep to get, where one lives, and what one eats.

DIF: Easy      REF: Marginal Thinking      OBJ: 1.2  
MSC: Understanding

11. Explain why economics is not such a “dismal science.”

ANS:

The study of economics isn’t concerned primarily with overpopulation and mass starvation, as were the predictions of Thomas Malthus. Economists focus on the proper allocation of scarce resources, even in the face of population changes (or other factors). So, in reality, economics is a study that seeks to improve the overall well-being of people through efficiency and optimization.

DIF: Moderate      REF: What Is Economics?      OBJ: 1.1  
MSC: Understanding

12. Explain how abundant resources such as water can be considered “scarce.”

ANS:

Scarcity refers to the limited nature of a resource. Even resources that are plentiful, like water, are not unlimited. In addition, some areas of the world do not have access to vast supplies of water, or must deal with temporary shortages due to drought. In all cases, scarcity is a real concern that must be answered by economics.

DIF: Easy      REF: What Is Economics?      OBJ: 1.1  
MSC: Understanding

13. Economics is divided into two subfields: microeconomics and macroeconomics. Why is this separation necessary?

ANS:

In general, the field of economics is so broad that it requires specialization, much like any other academic discipline. Specifically, the two subfields deal with entirely different aspects of study. Microeconomics is a zoomed-in look at how individual persons and firms make decisions and the consequences of those decisions. Macroeconomics is a zoomed-out look of how entire economies operate. While the same principles govern both studies, it is impractical to analyze the movement of mass phenomena like unemployment, interest rates, or economic growth through the lens of individual decision makers.

DIF: Moderate      REF: What Is Economics?      OBJ: 1.1  
MSC: Understanding

14. If opportunity cost is the value of the best alternative not chosen, why is a rejected option important?

ANS:

Alternatives are still valuable measuring sticks. It is impossible to determine which choice is best without knowing the value of all possible alternatives—especially the highest valued alternative. Opportunity cost also gives a clearer picture of the total cost of a decision. Most people only view cost in explicit terms, for example, the amount of money spent to obtain an item or service. In reality, the true cost goes beyond that. With scarcity, we live in a world of trade-offs, and making one decision means earning those benefits but sacrificing those of the rejected options.

DIF: Moderate      REF: Opportunity Cost      OBJ: 1.2  
MSC: Analyzing

15. Explain how a market might develop naturally without planning by government.

ANS:

When individuals attempt to produce multiple goods or provide multiple services, they quickly develop a sense of which is the most efficient activity. This recognition gives them intuition that they would be better off if they were to specialize in the activity for which they have a comparative advantage. For other goods and services that the individuals desire, they should trade with other producers that have a comparative advantage in those activities. So, markets naturally emerge out of a desire to improve individual well-being.

DIF: Moderate      REF: Trade      OBJ: 1.2      MSC: Understanding

16. When the Federal Reserve, the entity that manages money and banking in the United States, announces changes in the supply of money it makes available to banks, it often causes a significant response in financial markets. Based on an understanding of incentives, why is this not surprising?

ANS:

Financial markets are comprised of decision makers that have an interest in the direction of the economy. Since incentives are simply a motivation to act, any major policy shift that dramatically affects the economy will produce a response in financial markets. Changes in Federal Reserve policy or interest rates are a signal of economic health and a clue into the decisions an individual or firm must make in order to benefit.

DIF: Moderate      REF: Incentives      OBJ: 1.2      MSC: Applying

17. Many car insurance companies offer discounts for safe drivers. The promise is lower premiums or a reduction in deductibles for customers that remain accident-free for a specified period of time. The discounts are not without a cost, however. Policyholders must pay an additional premium (periodic fee paid for insurance coverage) in order to participate in the program. Understanding opportunity cost, explain how safe-driver programs might be beneficial for some customers but not others.

ANS:

For poor drivers, a safe-driver program is never a wise option. The insured would sacrifice additional money for no perceivable benefit. For a mediocre driver, it is still probably a bad option. The likelihood of an accident over a period is probably as great as having none. An individual risks sacrificing lots of money in premiums for no benefit. At least with the alternative, you get nothing, but you also sacrifice nothing. For the good driver, it is still a difficult decision. Clearly, a discount on premiums would be a preferable reward for safe driving, because utilizing a lower deductible still requires spending personal funds. An individual is forced to compare the additional premium sacrificed against the risk of things like damaged windshields, theft, or vandalism.

DIF: Moderate      REF: Opportunity Cost      OBJ: 1.2  
MSC: Applying

18. It can be said that voluntary trade will not occur unless all parties involved believe that they will be better off after trading than they were before. Considering that the supply of goods and services does not change in trade and only changes hands, how is it possible that each party improves? Shouldn't one party benefit at the expense of another?

ANS:

Not at all. Each party in a trade transaction values goods and services differently. Someone may produce beans, but wants rice to go along with them. If he or she produces more beans than can be consumed personally, the marginal benefit declines sharply for each unit of beans beyond the need for consumption. Someone who produces rice but is seeking beans has the opposite problem. He or she places little value on each unit of rice beyond the need for consumption. So, both parties have what the other wants. Not only are the demands of the two traders met but the desire for beans and rice add value to the excess supplies.

DIF: Easy      REF: Trade      OBJ: 1.2      MSC: Understanding

19. Alejandro and Roger are working on a group project for class that requires writing a paper and designing charts to explain the information contained in the paper. Alejandro can write three pages of the paper in the same time it takes him to create two charts. Roger can write two pages of the paper in the same time he can produce a single chart. What is the opportunity cost for each to produce a single page of the essay? Based on the opportunity cost, who has the comparative advantage in writing the essay?

ANS:

When Alejandro writes three pages of the paper, he is sacrificing the production of two charts. So, to produce a single page of the paper, Alejandro would sacrifice  $\frac{2}{3}$  charts, or 0.67. When Roger writes two pages of the paper, he is sacrificing the production of one chart. So, to produce a single page of the paper, Roger would sacrifice  $\frac{1}{2}$  charts, or 0.5. Roger has a lower opportunity cost because he has to give up fewer charts to produce pages of the paper, so he can be said to have a comparative advantage in that activity.

DIF: Difficult      REF: Trade      OBJ: 1.2      MSC: Applying

20. Explain why every decision requires some sort of trade-off.

ANS:

It may be easy to think of things in terms of money or natural resources because they are tangible, and we are familiar with their limited nature. But, even in situations where money or other resources are not a limiting factor, time always creates a trade-off. The fact that an individual is making a decision implies that there are multiple options that cannot occur simultaneously for one or more reasons. Besides, until humans find a way to make themselves immortal, their life spans are finite.

DIF: Easy      REF: Trade-offs      OBJ: 1.2      MSC: Understanding

21. Some parents discourage their college student children from taking economics, saying it is not a useful discipline. Why are they incorrect?

ANS:

Since we live in a world where there are not enough resources to produce all the goods and services that are wanted and needed, almost every decision in society involves economic calculations. These calculations determine how these scarce resources are allocated in our economic system. Learning economics enables one to use this process, especially for one's own decisions.

DIF: Moderate      REF: What Is Economics?      OBJ: 1.1  
MSC: Understanding

22. A teacher asks a student to research the details of a question that the teacher couldn't answer completely. The student responds, "What will you give me if I do it?" Use economic reasoning to analyze the response.

ANS:

The student's economic time frame is short run—he or she will only give up the time if some incentive by the teacher is offered in return. The student is not considering the long run—the pursuit of knowledge is almost always useful to life's application. The opportunity cost of giving up the time becomes lower when this latter value is considered.

DIF: Moderate

REF: Opportunity Cost

OBJ: 1.2

MSC: Applying

23. If school teachers are offered more pay to teach year-round school instead of nine-month school, then will they respond to the incentive?

ANS:

A longer work year for a teacher would likely be viewed as a marginal cost of teaching. More pay would be viewed as a marginal benefit. The economic calculation must compare these values and come to a decision.

DIF: Difficult

REF: Marginal Thinking

OBJ: 1.2

MSC: Applying

24. Distinguish between a direct incentive and an indirect incentive.

ANS:

A direct incentive is almost always recognizable, involving a measurable trade-off: "Lower the price and I'll buy more." An indirect incentive may not be recognizable: "Recycle your glass and save the planet." Either incentive may create an unintended consequence, but every transaction between economic actors can and does create some unintended consequence.

DIF: Difficult

REF: Incentives

OBJ: 1.2

MSC: Applying

25. Some environmentalists want to eliminate all pollution. Use economics to respond to this statement.

ANS:

Even before humanity evolved with its industrial processes, pollution existed on our planet. To determine just what constitutes pollution, and what amounts, if any, are acceptable to society, has taken resources that could otherwise have been used for more productive activities, such as medical cures or electronics technology research that might produce less pollution. Hence, the opportunity cost of trying to eliminate all pollution would likely mean a lower standard of living for our planet's inhabitants.

DIF: Difficult

REF: Opportunity Cost

OBJ: 1.2

MSC: Applying



## **CHAPTER 2**

# **Model Building and Gains from Trade**

### **LEARNING OBJECTIVES**

- 2.1 How do economists study the economy?
- 2.2 What is a production possibilities frontier?
- 2.3 What are the benefits of specialization and trade?
- 2.4 What is the trade-off between having more now and having more later?

## MULTIPLE CHOICE

1. An economist's use of experiments and real-world data to test a theory is an example of
  - a. the scientific method in economics.
  - b. macroeconomics.
  - c. economic growth.
  - d. normative analysis.
  - e. comparative advantage.

ANS: A                      DIF: Easy                      REF: The Scientific Method in Economics  
 OBJ: 2.1                      MSC: Understanding

2. On the television show *MythBusters*, the hosts design experiments, collect data, and test theories based on popular myths. This is an example of
  - a. the scientific method.
  - b. economic growth.
  - c. gains from trade.
  - d. production possibilities.
  - e. absolute advantage.

ANS: A                      DIF: Easy                      REF: The Scientific Method in Economics  
 OBJ: 2.1                      MSC: Remembering

3. Economists use the scientific method and the tools of economics to study
  - a. only the decisions of individuals.
  - b. only the decisions of business firms.
  - c. only economic growth and gross domestic product (GDP).
  - d. only the production possibilities curve.
  - e. anything around them; the world is the economist's laboratory.

ANS: E                      DIF: Easy                      REF: The Scientific Method in Economics  
 OBJ: 2.1                      MSC: Remembering

4. The scientific method and the tools of economics are useful in examining
  - a. only how individuals make decisions.
  - b. only how business firms make decisions.
  - c. only how government policies affect macroeconomic outcomes.
  - d. only the trade-offs evident in the production possibilities frontier (PPF).
  - e. anything; economists will use their tools to study anything in the world around them.

ANS: E                      DIF: Easy                      REF: The Scientific Method in Economics  
 OBJ: 2.1                      MSC: Remembering

5. A positive statement
  - a. is a claim that can be tested.
  - b. is a statement about what ought to be.
  - c. is a declaration of opinion.
  - d. is a claim that cannot be tested.
  - e. cannot be evaluated using the scientific method.

ANS: A                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Remembering

6. Which of the following is a positive statement?
- An economist should test every theory at least twice.
  - Increases in the minimum wage cause unemployment.
  - We ought to deregulate the mortgage market.
  - The government must provide unlimited health care to citizens.
  - We should forgo some current consumption in order to invest in the future.

ANS: B                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Applying

7. Which of the following is a normative statement?
- The sky is blue.
  - The sky is green with pink polka dots.
  - Points on the production possibilities frontier (PPF) are efficient.
  - Points outside the production possibilities frontier (PPF) are unattainable with current resources.
  - We should strive to push the production possibilities frontier (PPF) outward.

ANS: E                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Applying

8. Which of the following is a positive statement?
- Nelly's dog should lose some weight.
  - Legally requiring dogs to have rabies shots will reduce the number of rabid dogs.
  - Nelly should take her dog to the veterinarian once a year for a checkup.
  - Chihuahuas are cuter than bulldogs.
  - All dogs should be required to wear leashes at all times.

ANS: B                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Applying

9. Which of the following is a normative statement?
- One should wear a helmet when cycling.
  - The sky is blue.
  - A bicycle has two wheels.
  - A unicycle has five wheels.
  - Electricity follows the path of least resistance.

ANS: A                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Applying

10. Which of the following is a positive statement?
- Individuals should make good long-term decisions.
  - Corporations should maximize shareholder value.
  - The government should reduce the level of unemployment.
  - The most important effects of policy happen in the short term.
  - The unemployment rate is 8 percent.

ANS: E                      DIF: Easy                      REF: Positive and Normative Analysis  
 OBJ: 2.1                      MSC: Applying

11. Which of the following is a positive statement?
- Winters in Arkansas are too cold.
  - Everyone should work in a bank to understand the true value of money.
  - Harvard University is the top education institution in the country.
  - On average, people save 15 percent when they switch to GEICO.
  - Everyone ought to have a life insurance policy.

ANS: D                      DIF: Easy                      REF: Positive and Normative Analysis  
OBJ: 2.1                      MSC: Applying

12. Which of the following is a normative statement?
- The current exchange rate is 0.7 British pounds per U.S. dollar.
  - In January, the average temperature in Fargo, North Dakota, is 56 degrees.
  - Winters in Arkansas are too cold.
  - On average, people save 15 percent when they switch to GEICO.
  - University of Virginia graduates earn more than Duke University graduates.

ANS: C                      DIF: Easy                      REF: Positive and Normative Analysis  
OBJ: 2.1                      MSC: Applying

13. The important act of holding all other variables constant while examining a particular variable is known as
- endogeneity.
  - a normative statement.
  - a positive statement.
  - macroeconomics.
  - ceteris paribus*.

ANS: E                      DIF: Easy                      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

14. *Ceteris paribus* means
- in sets of two.
  - constant opportunity cost.
  - other things being equal.
  - buyer beware.
  - there is no reason to argue about people's tastes.

ANS: C                      DIF: Easy                      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

15. Which of the following is necessary to build a good economic model?
- normative statements
  - assumptions
  - opinions
  - complex math
  - realism

ANS: B                      DIF: Moderate                      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

16. The process of examining a change in one variable in a model while assuming that all the other variables remain constant is called

- a. exogenous factors.
- b. *ceteris paribus*.
- c. normative analysis.
- d. positive analysis.
- e. faulty assumptions.

ANS: B                      DIF: Moderate              REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

17. Why do economists use models?

- a. Models are used to add complexity to a simple world.
- b. Models allow us to study a simplified version of a complex world.
- c. Models allow us to control exogenous factors.
- d. Models make the world harder to understand.
- e. Models allow us to examine more factors than what actually exists in our world.

ANS: B                      DIF: Easy                      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

18. Variables that are NOT accounted for in a model are called

- a. endogenous factors.
- b. exogenous factors.
- c. normative statements.
- d. positive statements.
- e. the scientific method.

ANS: B                      DIF: Moderate              REF: Economic Models  
OBJ: 2.1                      MSC: Understanding

19. Variables that are controlled for in a model are called

- a. normative statements.
- b. positive statements.
- c. endogenous factors.
- d. exogenous factors.
- e. the scientific method.

ANS: C                      DIF: Easy                      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

20. Nadine is considering the “dress well, test well” theory, which argues that one performs better on exams when one dresses nicer than one does when wearing sweatpants. If Nadine wants to test this theory over the course of the semester, which of the following would be an endogenous factor in her experiment?

- a. her innate ability in the subject
- b. the difficulty of the exam
- c. the relative mix of multiple-choice and short-answer questions
- d. her clothing choice for the exam
- e. the amount of time Nadine spends studying for the exam

ANS: D                      DIF: Moderate              REF: Economic Models  
OBJ: 2.1                      MSC: Applying

21. When testing a paper airplane on a campus quad, which of the following would be an exogenous factor?
- a. the weight of the paper used in making the plane
  - b. the ratio of wingspan to plane length
  - c. the height of the body of the plane
  - d. the level of wind encountered
  - e. the number of folds in the wings

ANS: D                      DIF: Moderate      REF: Economic Models  
 OBJ: 2.1                      MSC: Applying

22. When testing a model rocket on a campus quad, which of the following would be an endogenous factor?
- a. the current wind speed across the quad
  - b. the quad's elevation and air pressure
  - c. the extent of precipitation
  - d. the gravitational pull of Earth
  - e. the size of the rocket engine

ANS: E                      DIF: Moderate      REF: Economic Models  
 OBJ: 2.1                      MSC: Applying

23. Car companies build wind tunnels to test the aerodynamics and the handling capabilities of their car designs. The many variables that can be precisely controlled inside the wind tunnel are considered \_\_\_\_\_ factors.
- a. normative
  - b. positive
  - c. comparative
  - d. endogenous
  - e. exogenous

ANS: D                      DIF: Moderate      REF: Economic Models  
 OBJ: 2.1                      MSC: Applying

24. One reason that economists make assumptions when designing models is to
- a. exclude variables that do not add predictive power to the model.
  - b. make models more like the real world.
  - c. make models more complex.
  - d. increase endogenous factors.
  - e. ensure that all possible factors are included.

ANS: A                      DIF: Difficult      REF: Economic Models  
 OBJ: 2.1                      MSC: Understanding

25. A model without any simplifying assumptions
- a. is highly complex and likely unworkable.
  - b. excludes important predictive variables.
  - c. is very helpful for solving tough, real-world problems.
  - d. does not look like the real-world problem it is meant to address.
  - e. provides simplified solutions to complex problems.

ANS: A                      DIF: Difficult      REF: Economic Models  
 OBJ: 2.1                      MSC: Understanding

26. The production possibilities frontier (PPF) shows
- the trade-off between the efficient production of two different goods.
  - the difference between microanalysis and macroanalysis.
  - the difference between normative and positive analysis.
  - how a firm should price a new product.
  - how price and quantity are related for a single good.

ANS: A                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Understanding

27. A graph that shows the maximum attainable combinations of two goods when society efficiently uses its productive resources is called
- a production possibilities frontier (PPF).
  - a supply curve.
  - opportunity cost.
  - a consumer demand curve.
  - absolute advantage.

ANS: A                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Understanding

28. At full employment, a society produces
- somewhere within its production possibilities frontier (PPF).
  - somewhere outside its PPF.
  - at the origin on its PPF graph.
  - on its PPF.
  - only one good.

ANS: D                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Understanding

29. The \_\_\_\_\_ illustrates the various combinations of output that a society can produce if all of its resources are being used efficiently.
- concept of absolute advantage
  - law of positive statements
  - law of demand
  - production possibilities frontier (PPF)
  - principle of comparative advantage

ANS: D                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.4                      MSC: Understanding

30. The area inside (within) the production possibilities frontier (PPF) contains \_\_\_\_\_ points.
- normative
  - positive
  - efficient
  - inefficient
  - high opportunity cost

ANS: D                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.4                      MSC: Understanding

31. *Ceteris paribus*, if a society is producing at a point on the production possibilities frontier (PPF), it can only increase the production of one good by
- also increasing the production of the second good.
  - decreasing the production of the second good.
  - increasing the price of the second good.
  - decreasing the price of the second good.
  - reducing the resources available for production.

ANS: B                      DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2                      MSC: Understanding

32. A society that is producing its maximum combination of goods and using all available resources for production
- has minimized its opportunity cost.
  - has maximized its opportunity cost.
  - is operating on its production possibilities frontier (PPF).
  - is operating outside its PPF.
  - has eliminated scarcity.

ANS: C                      DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2                      MSC: Understanding

33. On a production possibilities frontier (PPF) that shows the trade-off between consumer goods and capital goods given a fixed amount of labor, unemployment is illustrated by
- movement from a point within the frontier to a point on the frontier.
  - a point outside the frontier.
  - a point within the frontier.
  - movement from a point on the frontier to another point on the frontier.
  - a point on the frontier.

ANS: C                      DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2                      MSC: Understanding

34. How will a reduction in the national unemployment rate affect a nation's production possibilities frontier (PPF)?
- It will cause the PPF to shift inward.
  - It will cause the PPF to shift outward.
  - It will move society to a point inward, to a point farther away from the PPF.
  - It will move society outward, to a point closer to or on the PPF.
  - It will push society to a point outside its PPF.

ANS: D                      DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2                      MSC: Understanding

35. Think of the production possibilities frontier (PPF) model. When society is producing the largest possible output from its resources, it is operating
- inefficiently.
  - efficiently.
  - with no opportunity cost.
  - inside (within) the PPF.
  - beyond its opportunity cost.

ANS: B                      DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2                      MSC: Understanding



36. Which of the following is NOT an assumption that economists make when developing a production possibilities frontier (PPF)?
- We live in a world with only two goods.
  - There are no increases in technology.
  - There is no change in available resources.
  - Society will always be producing somewhere on the PPF.
  - There are no decreases in technology.

ANS: D

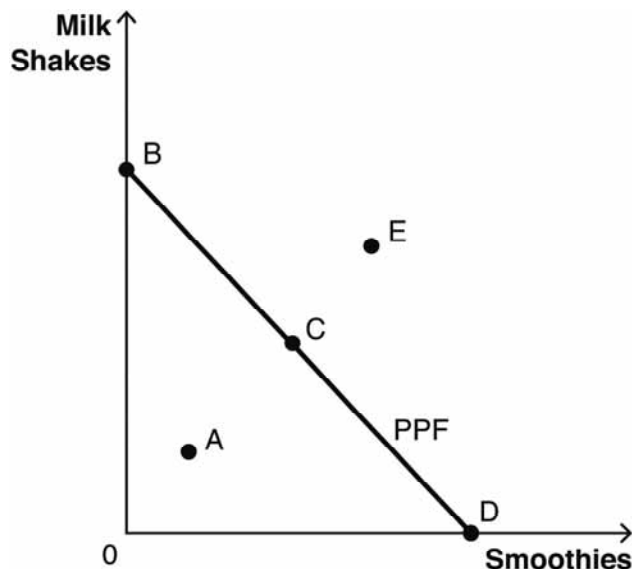
DIF: Difficult

REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Understanding

Refer to the following figure to answer the next five questions.



37. Which point in the corresponding figure represents a combination of smoothies and milk shakes that society CANNOT currently produce?
- point A
  - point B
  - point C
  - point D
  - point E

ANS: E

DIF: Easy

REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Analyzing

38. Which point in the corresponding figure shows that productive resources are NOT fully employed?
- point A
  - point B
  - point C
  - point D
  - point E

ANS: A

DIF: Easy

REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Analyzing

39. In the figure, point A is
- an efficient point.
  - unattainable with current resources.
  - an inefficient point.
  - the equilibrium.
  - the point where society would prefer to consume.

ANS: C                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Analyzing

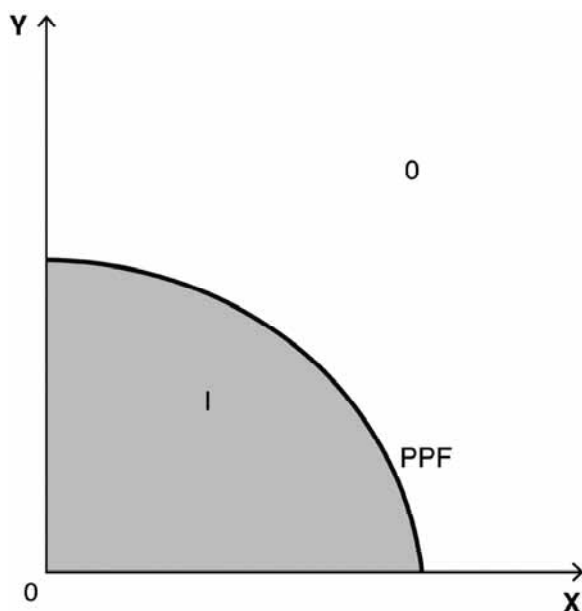
40. In the figure, point E is
- an efficient point.
  - unattainable with current resources.
  - an inefficient point.
  - the equilibrium.
  - evidence that trade does not enrich society.

ANS: B                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Analyzing

41. Which statement best describes the opportunity cost evident in the production possibilities frontier (PPF) for the accompanying figure?
- The law of increasing relative cost applies because the PPF is a straight line.
  - The law of increasing relative cost applies because the PPF is bowed outward.
  - The opportunity cost is constant because the PPF is a straight line.
  - The opportunity cost is constant because the PPF is bowed outward.
  - The opportunity cost decreases because the line has negative slope.

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

Consider the production possibilities frontier (PPF) shown in the figure below to answer the next three questions.



42. Given current resources and technology, the attainable range is best described as
- only area O: points outside the PPF.
  - points on the PPF only.
  - only area I: points inside the PPF.
  - area I: points inside the PPF and points on the PPF.
  - area O: points outside the PPF and points on the PPF.

ANS: D  
OBJ: 2.2

DIF: Moderate  
MSC: Analyzing

REF: What Is a Production Possibilities Frontier?

43. The set of efficient points is best described as
- only area O: points outside the PPF.
  - points on the PPF only.
  - only area I: points inside the PPF.
  - area I: inside the PPF and points on the PPF.
  - area O: outside the PPF and points on the PPF.

ANS: B  
OBJ: 2.2

DIF: Moderate  
MSC: Analyzing

REF: What Is a Production Possibilities Frontier?

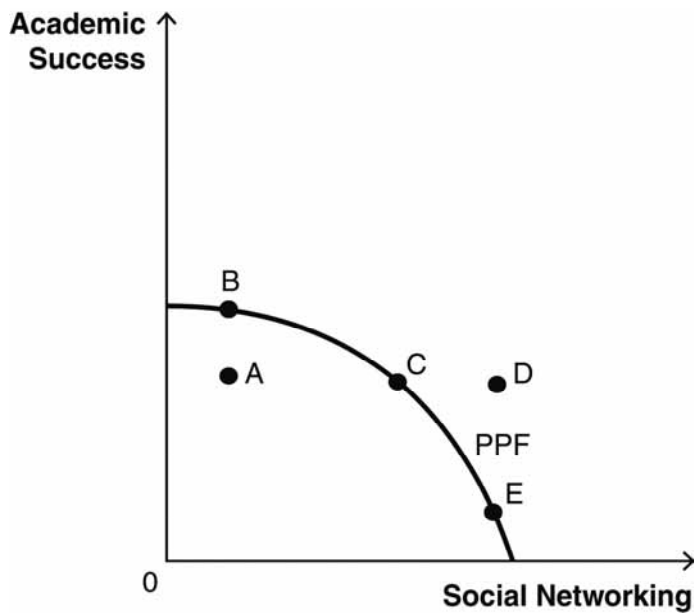
44. Given current resources and technology, the unattainable range is best described as
- only area O: points outside the PPF.
  - points on the PPF only.
  - only area I: points inside the PPF.
  - area I: inside the PPF and points on the PPF.
  - area O: outside the PPF and points on the PPF.

ANS: A  
OBJ: 2.2

DIF: Moderate  
MSC: Analyzing

REF: What Is a Production Possibilities Frontier?

Refer to the accompanying figure to answer the next four questions.



45. How is opportunity cost illustrated?
- a move from point A to point B
  - a move from point A to point C
  - a move from point C to point D
  - a move from point B to point C
  - a move from point D to point E

ANS: D DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2 MSC: Analyzing

46. The inefficient point(s) is/are

- point A.
- points C and D.
- point C.
- point D.
- points B, C, and E.

ANS: A DIF: Easy

OBJ: 2.2 MSC: Analyzing

REF: What Is a Production Possibilities Frontier?

47. Unemployed resources are evident at

- point A.
- point B.
- point C.
- point D.
- points B, C, and E.

ANS: A DIF: Easy

OBJ: 2.2 MSC: Analyzing

REF: What Is a Production Possibilities Frontier?

48. Given the current resources, one would need even more hours in each day in order to attain
- a. point A.
  - b. point B.
  - c. point C.
  - d. point D.
  - e. point E.

ANS: D                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Analyzing

49. The \_\_\_\_\_ states that the opportunity cost of producing a good always rises as one produces more of it.
- a. law of increasing relative cost
  - b. law of positive economics
  - c. law of demand
  - d. production possibilities frontier (PPF) model
  - e. zero-sum game

ANS: A                      DIF: Easy  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Remembering

50. When the opportunity cost of producing a good rises as someone produces more of it, one experiences
- a. normative economics.
  - b. increasing relative costs.
  - c. downward-sloping demand.
  - d. inferior goods.
  - e. increasing marginal utility.

ANS: B                      DIF: Easy  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Remembering

51. As we move from one efficient point on the production possibilities frontier (PPF) to another efficient point on the PPF, we experience
- a. decreasing relative cost.
  - b. opportunity cost.
  - c. macroeconomics.
  - d. unlimited resources.
  - e. unattainable combinations.

ANS: B                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Remembering

52. Suppose someone is studying a production possibilities frontier (PPF) that has a bowed-out shape relative to the origin. What causes this shape?
- a. economic growth
  - b. the law of increasing relative cost
  - c. absolute advantage
  - d. normative economics
  - e. more resources

ANS: B                      DIF: Difficult  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Understanding

53. Opportunity cost is evident on the production possibilities frontier (PPF) graph
- as we move from one point on the frontier to another point on the frontier.
  - as we move from the origin to any inefficient point.
  - as we move from one unattainable point to an efficient point on the frontier.
  - as we move from an inefficient point to the origin.
  - at any one single point on the graph.

ANS: A                      DIF: Difficult

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Understanding

54. Suppose someone finds a production possibilities frontier (PPF) that is shaped like a straight line. What can one determine about the production of the two goods?
- Production of the two goods is subject to decreasing relative cost.
  - Production of the two goods is subject to increasing relative cost.
  - Production of the two goods is subject to constant opportunity cost anywhere along the PPF.
  - One producer must have an absolute advantage in production.
  - More resources will not cause the PPF to shift.

ANS: C                      DIF: Difficult

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Understanding

55. The movie *Saving Private Ryan* is about a military mission to find and recover a particular soldier—Private Ryan. The movie is predominantly about how much was given up in an effort to save this one particular soldier. The main economic theme of the movie is
- absolute advantage.
  - opportunity cost.
  - normative analysis.
  - comparative advantage.
  - positive advantage.

ANS: B                      DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Understanding

*Mikhail and Stefan are both artists who can create sculptures or paintings each day. The following table describes their maximum outputs per day. Use this table to answer the next six questions.*

	Sculptures	Paintings
Mikhail	10	5
Stefan	6	2

56. What is Mikhail's opportunity cost of a sculpture?
- 2 paintings
  - 1/2 painting
  - 3 paintings
  - 1/3 sculpture
  - 1/2 sculpture

ANS: B                      DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Analyzing

57. What is Stefan's opportunity cost of a sculpture?

- a. 1/2 painting
- b. 1/3 painting
- c. 3 paintings
- d. 1/3 sculpture
- e. 3/5 sculpture

ANS: B

DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2

MSC: Analyzing

58. What is Mikhail's opportunity cost of a painting?

- a. 1/2 painting
- b. 1/2 sculpture
- c. 3 paintings
- d. 2 sculptures
- e. 2 paintings

ANS: D

DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2

MSC: Analyzing

59. What is Stefan's opportunity cost of a painting?

- a. 1/3 painting
- b. 1/3 sculpture
- c. 2/5 sculpture
- d. 3 paintings
- e. 3 sculptures

ANS: E

DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2

MSC: Analyzing

60. Based on the table, does Mikhail or Stefan have an absolute advantage?

- a. Yes, Mikhail has an absolute advantage in both sculptures and paintings.
- b. Yes, Stefan has an absolute advantage in both sculptures and paintings.
- c. Yes, Mikhail has an absolute advantage in paintings, and Stefan has an absolute advantage in sculptures.
- d. Yes, Mikhail has an absolute advantage in sculptures, and Stefan has an absolute advantage in paintings.
- e. No, neither has an absolute advantage.

ANS: A

DIF: Easy

REF: Gains from Trade

OBJ: 2.3

MSC: Analyzing

61. Based on the table, does Mikhail or Stefan have a comparative advantage?

- a. Yes, Mikhail has a comparative advantage in both sculptures and paintings.
- b. Yes, Stefan has a comparative advantage in both sculptures and paintings.
- c. Yes, Mikhail has a comparative advantage in paintings, and Stefan has a comparative advantage in sculptures.
- d. Yes, Mikhail has a comparative advantage in sculptures, and Stefan has a comparative advantage in paintings.
- e. No, neither has a comparative advantage.

ANS: C

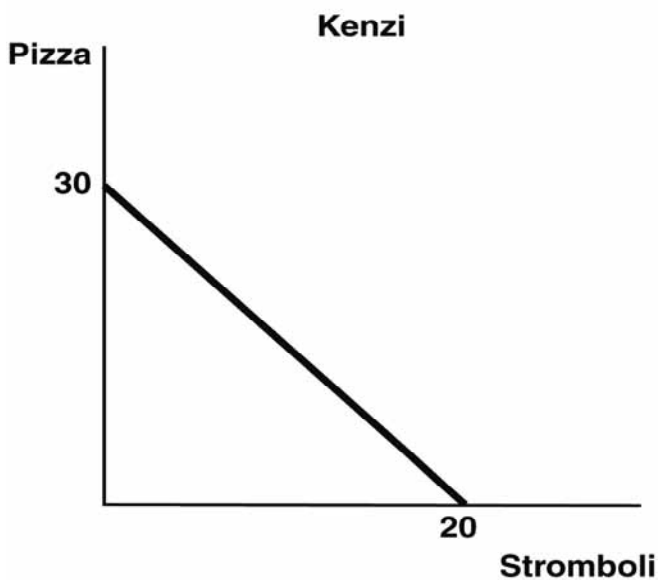
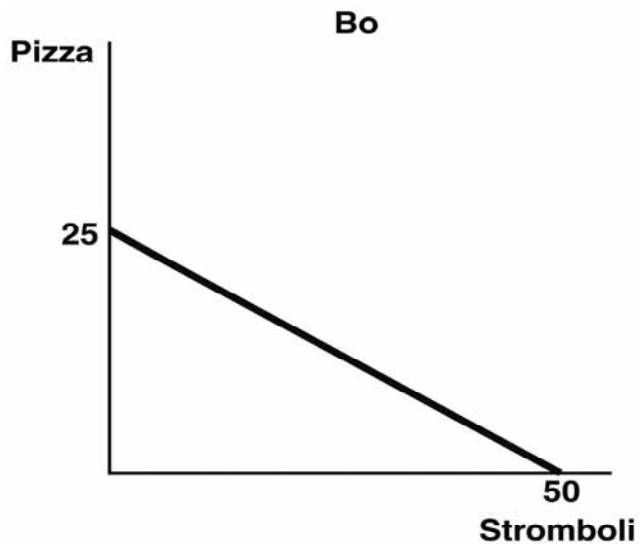
DIF: Moderate

REF: Comparative Advantage

OBJ: 2.3

MSC: Analyzing

The figures below depict the production possibilities frontiers (PPFs) for two people who can allocate the same amount of time between making pizzas and making stromboli. Refer to these figures to answer the next six questions.



62. What is Bo's opportunity cost of making 1 pizza?
- a. 50 stromboli
  - b. 20 stromboli
  - c. 2.5 stromboli
  - d. 2 stromboli
  - e. 1.5 stromboli

ANS: D                      DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Analyzing



63. What is Kenzi's opportunity cost of making 1 stromboli?
- a. 30 pizzas
  - b. 20 stromboli
  - c. 2 pizzas
  - d. 1.5 pizzas
  - e. 2/3 pizza

ANS: D                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

64. What is Bo's opportunity cost of making 1 stromboli?
- a. 1/2 pizza
  - b. 2/3 pizza
  - c. 2 pizzas
  - d. 2 stromboli
  - e. 25 pizzas

ANS: A                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

65. Which statement best describes the absolute advantage as shown in the graphs?
- a. Kenzi has an absolute advantage in the production of both.
  - b. Bo has an absolute advantage in the production of both.
  - c. Bo has an absolute advantage in the production of pizzas, and Kenzi has an absolute advantage in the production of stromboli.
  - d. Kenzi has an absolute advantage in the production of pizzas, and Bo has an absolute advantage in the production of stromboli.
  - e. They both have an absolute advantage in the production of stromboli.

ANS: D                      DIF: Moderate                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

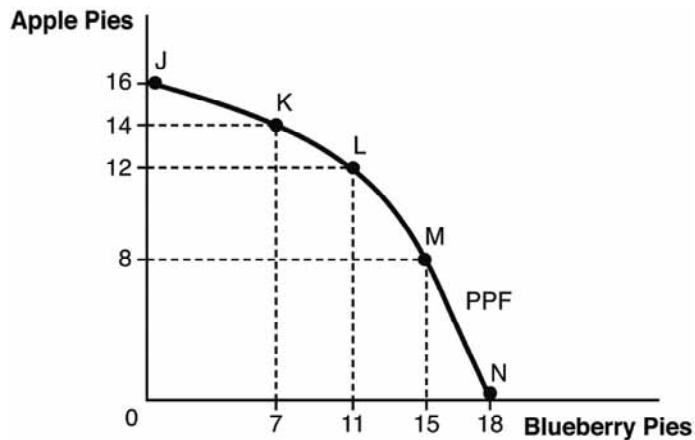
66. Based on the figure, which statement about comparative advantage is true?
- a. Bo has a comparative advantage in the production of stromboli because her opportunity cost is lower.
  - b. Bo has a comparative advantage in the production of stromboli because her opportunity cost is higher.
  - c. Bo has a comparative advantage in the production of pizzas because her opportunity cost is lower.
  - d. Bo has a comparative advantage in the production of pizzas because her opportunity cost is higher.
  - e. Bo has a comparative advantage in the production of both pizzas and stromboli.

ANS: A                      DIF: Moderate                      REF: Comparative Advantage  
 OBJ: 2.3                      MSC: Analyzing

67. If Bo and Kenzi were to specialize and trade, at what exchange rate would they find some quantity of trade to be mutually beneficial?
- a. 3 pizzas for 1 stromboli
  - b. 1 pizza for 1 stromboli
  - c. 10 pizzas for 2 stromboli
  - d. 1 pizza for 1/2 stromboli
  - e. 1 pizza for 1/4 stromboli

ANS: B                      DIF: Difficult                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Analyzing

Refer to the following figure for the next five questions.



68. The opportunity cost of increasing the production of apple pies from 12 to 14 pies is \_\_\_\_\_ pies.
- 2 blueberry
  - 14 apple
  - 7 blueberry
  - 4 blueberry
  - 2 apple

ANS: D                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

69. The opportunity cost of increasing production of apple pies from 14 to 16 pies is \_\_\_\_\_ pies.
- 2 blueberry
  - 14 apple
  - 7 blueberry
  - 4 blueberry
  - 16 blueberry

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

70. The opportunity cost of increasing production of blueberry pies from 7 to 11 pies is \_\_\_\_\_ pies.
- 2 blueberry
  - 14 apple
  - 7 blueberry
  - 4 apple
  - 2 apple

ANS: E                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

71. As we move from points N to M to L, the opportunity cost of additional apple pie
- decreases due to the law of increasing relative cost.
  - increases due to the law of increasing relative cost.
  - decreases due to the law of normative economics.
  - increases due to the law of marginal analysis.
  - decreases due to enhancements in technology.

ANS: B                      DIF: Difficult  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

72. According to the figure, a new technology that makes it easier to peel, core, and prepare apples will cause
- the entire production possibilities frontier (PPF) to shift outward.
  - the entire production possibilities frontier (PPF) to shift inward.
  - the production possibilities frontier (PPF) to rotate outward to a larger maximum quantity of apple pies with no change in maximum blueberry pies.
  - the production possibilities frontier (PPF) to rotate outward to a larger maximum quantity of blueberry pies with no change in maximum apple pies.
  - the production possibilities frontier (PPF) to stay exactly the same because there is no change in resources.

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Applying

73. Economic growth can be depicted on a production possibilities frontier (PPF) as an
- inward shift of the PPF.
  - outward shift of the PPF.
  - inward rotation along the  $x$  axis.
  - inward rotation along the  $y$  axis.
  - increase in opportunity cost.

ANS: B                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Understanding

74. An increase in general resources that affects the production of both goods on a production possibilities frontier (PPF) would cause an
- inward shift of the PPF.
  - outward shift of the PPF.
  - outward rotation along the  $x$  axis.
  - outward rotation along the  $y$  axis.
  - increase in opportunity cost.

ANS: B                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Remembering

75. Economic growth is represented on a production possibilities frontier (PPF) by the PPF
- getting steeper.
  - getting flatter.
  - shifting inward.
  - shifting outward.
  - rotating downward.

ANS: D                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Understanding

76. An increase in the labor force would be reflected in a society's production possibilities frontier (PPF) by an
- increase in opportunity cost.
  - inward shift of the PPF.
  - outward shift of the PPF.
  - outward rotation along the  $x$  axis.
  - outward rotation along the  $y$  axis.

ANS: C

DIF: Easy

REF: The Production Possibilities Frontier and Economic Growth

OBJ: 2.2

MSC: Applying

77. A town on the Gulf Coast is battered by a massive hurricane that destroys most of its productive resources. The community's production possibilities frontier (PPF) would show an
- inward shift of the PPF.
  - outward shift of the PPF.
  - outward rotation along the  $x$  axis.
  - outward rotation along the  $y$  axis.
  - increase in opportunity cost.

ANS: A

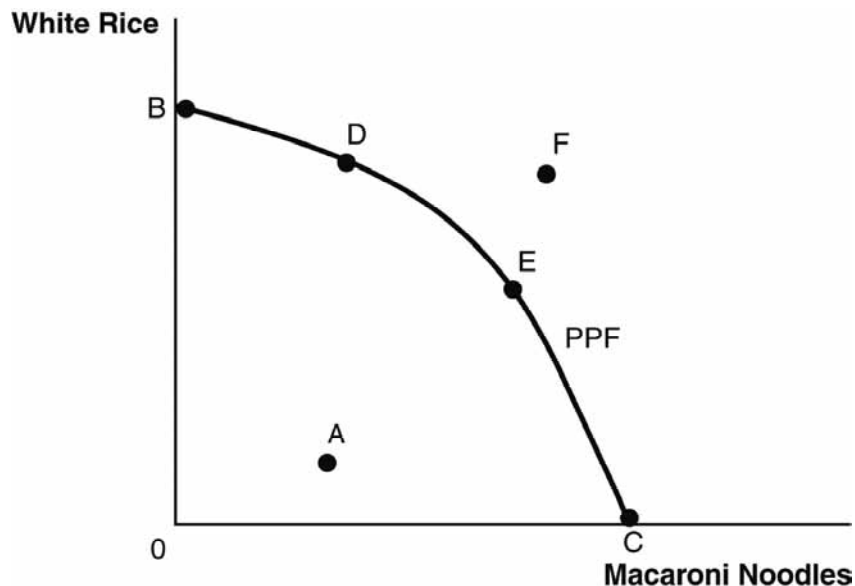
DIF: Difficult

REF: The Production Possibilities Frontier and Economic Growth

OBJ: 2.2

MSC: Applying

Refer to the following figure to answer the next five questions.



78. Which of the following represents an inefficient point?
- point A
  - point B
  - point C
  - point D
  - point F

ANS: A

DIF: Easy

REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Analyzing

79. Which of the following represents a point that is unattainable with current resources and technology?
- a. point B
  - b. point C
  - c. point D
  - d. point E
  - e. point F

ANS: E                      DIF: Easy                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Analyzing

80. What is the most preferred consumption point for a carbohydrate-loving society?
- a. point B
  - b. point C
  - c. point D
  - d. point E
  - e. point F

ANS: E                      DIF: Moderate                      REF: What Is a Production Possibilities Frontier?  
 OBJ: 2.2                      MSC: Analyzing

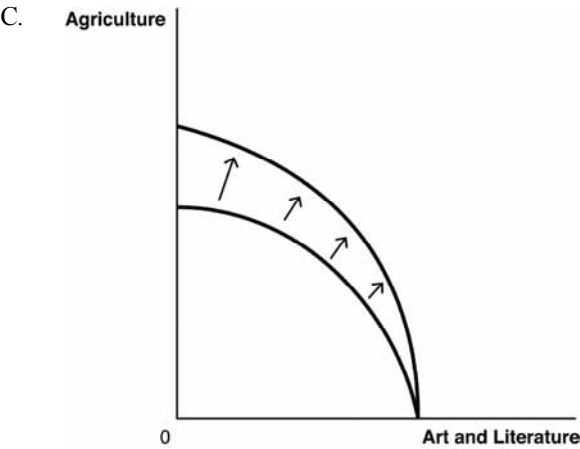
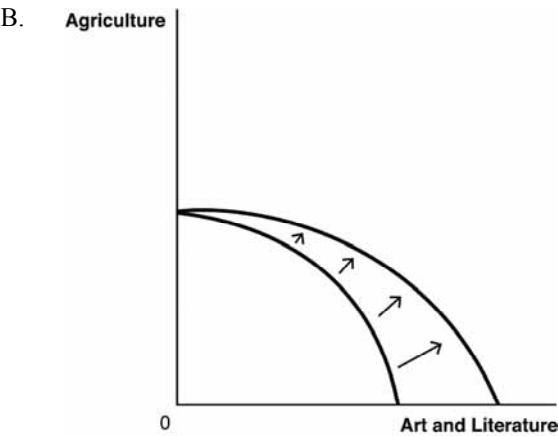
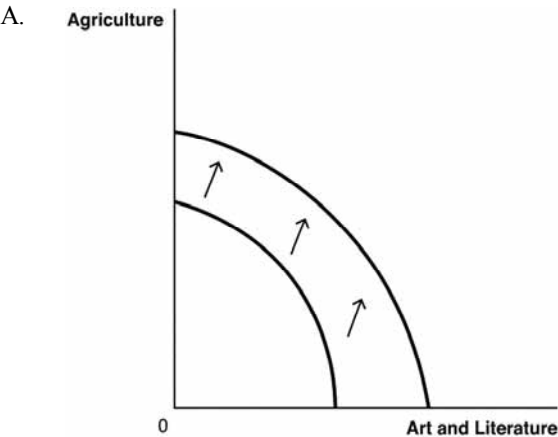
81. We can see that the opportunity cost of moving from point D to point E is different from the opportunity cost of moving from point D to point C because
- a. growing rice requires more water than growing wheat for pasta does.
  - b. the slope of the production possibilities frontier (PPF) is different in each of the two segments.
  - c. they are all efficient points.
  - d. they are all attainable points.
  - e. the opportunity cost is constant along the PPF.

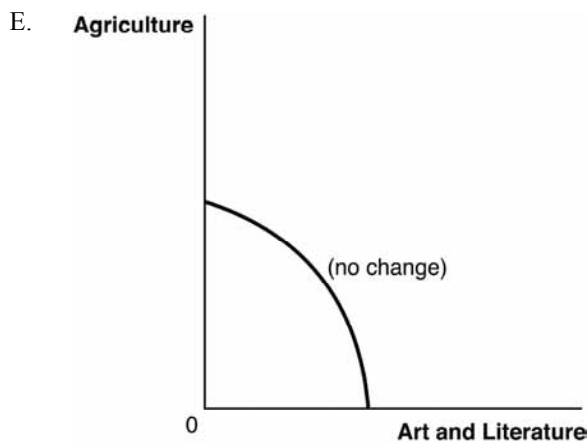
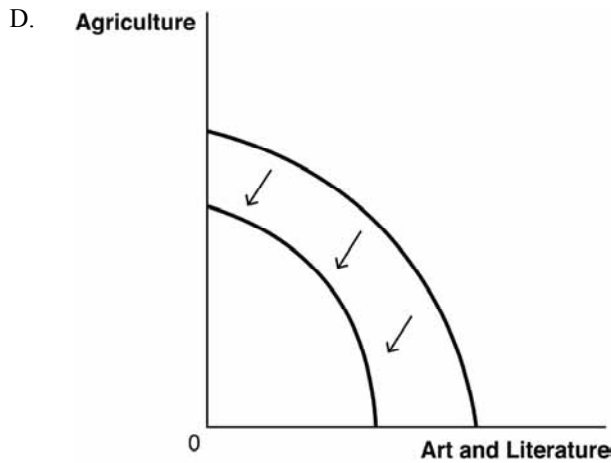
ANS: B                      DIF: Difficult  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

82. This society could reach point F when there is a(n)
- a. increase in the monetary price of white rice.
  - b. credible new study that shows eating pasta reduces the risk of heart attacks.
  - c. new technology that makes the storage and transport of both rice and pasta more efficient.
  - d. new tax on the sale of both rice and pasta.
  - e. increase in the monetary price of macaroni.

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Applying

Use these production possibilities frontier (PPF) curves, which compare the ancient production of agricultural products to art and literature, to answer the next four questions.





83. Suppose a great plague wipes out half of the society's population. Which of the following graphs best depicts how this would affect the PPF?

- |            |            |
|------------|------------|
| a. Graph A | d. Graph D |
| b. Graph B | e. Graph E |
| c. Graph C |            |

ANS: D

DIF: Moderate

REF: The Production Possibilities Frontier and Economic Growth

OBJ: 2.2

MSC: Analyzing

84. Suppose the plow is invented and agricultural productivity greatly increases. Which of the following graphs best depicts how this would affect the PPF?

- |            |            |
|------------|------------|
| a. Graph A | d. Graph D |
| b. Graph B | e. Graph E |
| c. Graph C |            |

ANS: C

DIF: Moderate

REF: The Production Possibilities Frontier and Economic Growth

OBJ: 2.2

MSC: Analyzing

85. Suppose the printing press is invented. Which graph best depicts how this would affect the PPF?
- a. Graph A
  - b. Graph B
  - c. Graph C
  - d. Graph D
  - e. Graph E

ANS: B                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

86. Suppose a new generation of baby boomers is entering the workforce. Which graph best depicts how this would affect the PPF?
- a. Graph A
  - b. Graph B
  - c. Graph C
  - d. Graph D
  - e. Graph E

ANS: A                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

*Consider the following scenario to answer the next five questions: Two friends, Monica and Chandler, enjoy baking bread and making apple pies. Monica takes two hours to bake 1 loaf of bread and one hour to make 1 pie. Chandler takes four hours to bake 1 loaf of bread and four hours to make 1 pie.*

87. What is Chandler's opportunity cost of baking 1 loaf of bread?
- a. 4 pies
  - b. 2 pies
  - c. 1 pie
  - d. 1 loaf of bread
  - e. 1/2 loaf of bread

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

88. What is Monica's opportunity cost of baking 1 loaf of bread?
- a. 4 pies
  - b. 2 pies
  - c. 1 pie
  - d. 1 loaf of bread
  - e. 1/2 loaf of bread

ANS: B                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

89. What is Chandler's opportunity cost of baking 1 pie?
- a. 4 pies
  - b. 2 pies
  - c. 1 pie
  - d. 1 loaf of bread
  - e. 1/2 loaf of bread

ANS: D                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing



90. What is Monica's opportunity cost of baking 1 pie?
- a. 2 pies
  - b. 1 pie
  - c. 1 loaf of bread
  - d. 1/2 loaf of bread
  - e. 2 loaves of bread

ANS: D                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

91. If Monica and Chandler decide to specialize in order to maximize their combined output, who should produce what?
- a. Chandler should specialize in making pies because he has an absolute advantage.
  - b. Monica should specialize in making pies and Chandler should specialize in making bread.
  - c. Chandler should specialize in making pies and Monica should specialize in making bread.
  - d. Monica should specialize in making bread and pies because she has a comparative advantage in both.
  - e. Monica should not specialize because she is better at producing both.

ANS: B                      DIF: Difficult                      REF: Comparative Advantage  
 OBJ: 2.3                      MSC: Analyzing

92. Specialization and trade allow individuals to
- a. consume outside their own production possibilities frontiers (PPFs).
  - b. shift their PPFs outward.
  - c. produce more goods with less technology.
  - d. eliminate scarcity.
  - e. produce fewer goods with less technology.

ANS: A                      DIF: Moderate                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Understanding

93. One has an absolute advantage in producing something whenever
- a. one enjoys producing that good.
  - b. one can produce more of it than someone else using the same quantity of resources.
  - c. one's opportunity cost is constant.
  - d. one's opportunity cost is lower than that of other producers.
  - e. one has specific training in the production of that good.

ANS: B                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Remembering

94. When one producer can create more of a good than another producer using the same quantity of resources, the first producer has
- a. a zero-sum game.
  - b. gains from trade.
  - c. an absolute advantage.
  - d. a comparative advantage.
  - e. increasing relative costs.

ANS: C                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Remembering

95. The ability of one producer to create more of a good than another producer using the same quantity of resources is called
- comparative advantage.
  - absolute advantage.
  - a positive-sum game.
  - gains from trade.
  - the law of increasing relative cost.

ANS: B                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Remembering

*Refer to the following table to answer the next five questions.*

	New York Pizzas	Philly Cheesesteaks
Jay-Z	40	120
Solange	50	125

96. Given the same quantity of resources, what is Solange's opportunity cost of producing a New York pizza?
- 5/2 Philly cheesesteaks
  - 2/5 Philly cheesesteak
  - 3 Philly cheesesteaks
  - 1/3 New York pizza
  - 4/5 New York pizza

ANS: A                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

97. Given the same quantity of resources, what is Jay-Z's opportunity cost of producing a New York pizza?
- 5/2 Philly cheesesteaks
  - 1/3 Philly cheesesteak
  - 3 Philly cheesesteaks
  - 120/125 New York pizza
  - 4/5 New York pizza

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

98. Given an eight-hour workday, which statement best describes the absolute advantage evident in the table?
- Jay-Z has an absolute advantage in making pizzas, and Solange has an absolute advantage in making cheesesteaks.
  - Solange has an absolute advantage in making pizzas, and Jay-Z has an absolute advantage in making cheesesteaks.
  - Jay-Z has an absolute advantage in the production of both foods.
  - Solange has an absolute advantage in the production of both foods.
  - Neither party has an absolute advantage.

ANS: D                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

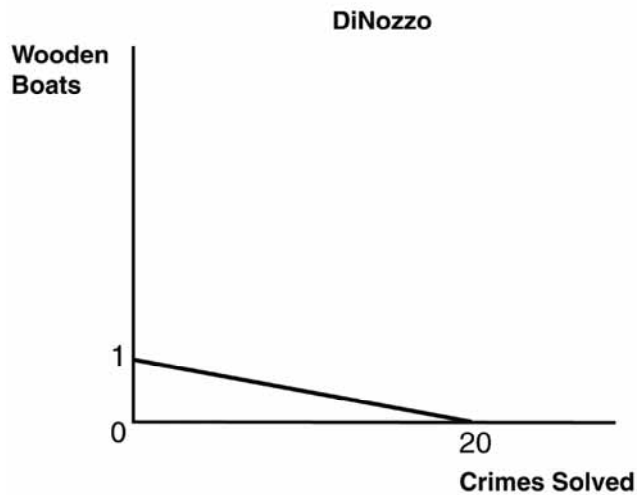
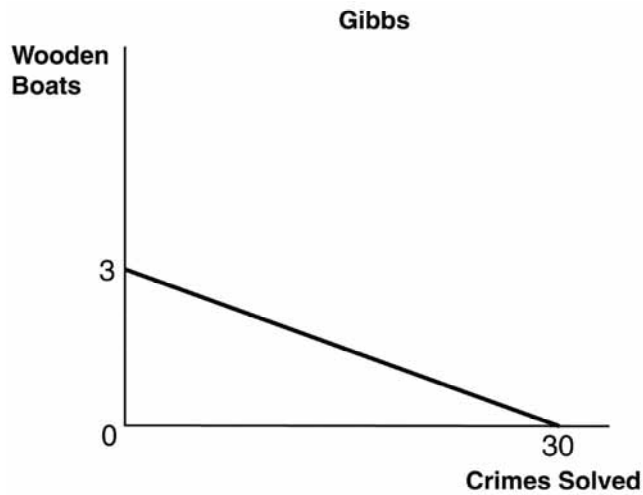
99. Given an eight-hour workday, to experience gains from trade,
- Solange should make pizzas and Jay-Z should make cheesesteaks.
  - Solange should make cheesesteaks and Jay-Z should make pizzas.
  - each should make his or her own cheesesteaks and pizzas.
  - Solange should produce both pizzas and cheesesteaks.
  - Jay-Z should produce both pizzas and cheesesteaks.

ANS: A                      DIF: Moderate              REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

100. Suppose that Solange and Jay-Z could each make either New York–style pizza or Philly cheesesteaks. Given an eight-hour workday, which of the following would permit them to consume outside their respective production possibilities frontiers (PPFs)?
- a decrease in technology
  - a decrease in resources
  - specialization and trade
  - efficient use of all their productive resources
  - an “Empire State” of mind

ANS: C                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Applying

The figures below depict the production possibilities frontiers (PPFs) for two people who can allocate the same amount of time between building wooden boats and solving crimes. Refer to these figures to answer the next five questions.



101. What is Gibbs's opportunity cost of making a wooden boat?
- a. 20 solved crimes
  - b. 30 solved crimes
  - c. 10 solved crimes
  - d. 1/20 of a boat
  - e. 1/10 of a boat

ANS: C                      DIF: Moderate

REF: The Production Possibilities Frontier and Opportunity Cost

OBJ: 2.2                      MSC: Analyzing

102. What is DiNozzo's opportunity cost of making a wooden boat?
- a. 20 solved crimes
  - b. 30 solved crimes
  - c. 10 solved crimes
  - d. 1/20 of a boat
  - e. 1/10 of a boat

ANS: A                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

103. What is Gibbs's opportunity cost of solving a crime?
- a. 20 solved crimes
  - b. 30 solved crimes
  - c. 5 solved crimes
  - d. 1/20 of a boat
  - e. 1/10 of a boat

ANS: E                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Opportunity Cost  
 OBJ: 2.2                      MSC: Analyzing

104. Which statement best describes absolute advantage?
- a. DiNozzo has an absolute advantage in the production of wooden boats.
  - b. DiNozzo has an absolute advantage in both.
  - c. Gibbs has an absolute advantage in solving crimes, whereas DiNozzo has an absolute advantage in making wooden boats.
  - d. Gibbs has an absolute advantage in both.
  - e. Gibbs has an absolute advantage in making wooden boats, whereas DiNozzo has an absolute advantage in solving crimes.

ANS: D                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

105. What is DiNozzo's opportunity cost for solving a crime?
- a. 20 solved crimes
  - b. 30 solved crimes
  - c. 5 solved crimes
  - d. 1/20 of a boat
  - e. 1/10 of a boat

ANS: D                      DIF: Moderate                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

Consider the following scenario to answer the next two questions: On a particular Saturday, Mark Zuckerberg and Bill Gates can either plant trees or spread mulch in their gardens. Their maximum output per day is listed in the following table, along with spaces where you can calculate the opportunity cost.

	<b>Trees Planted</b>	<b>Opportunity Cost of 1 Tree</b>	<b>Amount of Mulch Spread (in cubic yards)</b>	<b>Opportunity Cost of Spreading 1 Cubic Yard of Mulch</b>
Zuckerberg	20		30	
Gates	15		30	

106. Based on this scenario, who has an absolute advantage in spreading mulch?
- Zuckerberg has the advantage because he gives up fewer trees each time he spreads 1 cubic yard of mulch.
  - Gates has the advantage because he gives up fewer trees each time he spreads 1 cubic yard of mulch.
  - Zuckerberg has the advantage because he gives up more trees each time he spreads 1 cubic yard of mulch.
  - Neither has an absolute advantage in spreading mulch.
  - Both parties have an absolute advantage in planting trees.

ANS: D                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Analyzing

107. At what terms of trade (relative price ratio) could they specialize and trade with one another so that both have more trees planted and mulch spread than they could accomplish on their own?
- 12 trees planted per 12 cubic yards of mulch spread
  - 10 trees planted per 12 cubic yards of mulch spread
  - 9 trees planted per 12 cubic yards of mulch spread
  - 7 trees planted per 12 cubic yards of mulch spread
  - 5 trees planted per 12 cubic yards of mulch spread

ANS: D                      DIF: Difficult                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Analyzing

108. If Lola can produce more output from a set amount of resources than Kevin, \_\_\_\_\_ has a(n) \_\_\_\_\_ advantage.
- Lola; comparative
  - Kevin; comparative
  - Lola; absolute
  - Kevin; absolute
  - Lola; normative

ANS: C                      DIF: Easy                      REF: Gains from Trade  
 OBJ: 2.3                      MSC: Applying

109. When one producer has a comparative advantage in production, he or she
- can produce more output than someone else using the same quantity of resources.
  - can produce a good at a lower opportunity cost than someone else.
  - does not benefit from trade with other producers.
  - is unable to reach his or her production possibilities frontier (PPF).
  - trades only with others who have the same comparative advantage.

ANS: B                      DIF: Easy                      REF: Comparative Advantage  
OBJ: 2.3                      MSC: Remembering

110. The ability of one producer to produce a good at a lower opportunity cost than another producer is called
- a normative statement.
  - a zero-sum game.
  - absolute advantage.
  - comparative advantage.
  - the law of increasing relative cost.

ANS: D                      DIF: Easy                      REF: Comparative Advantage  
OBJ: 2.3                      MSC: Remembering

111. To determine which of two producers has a comparative advantage, one would need to know their
- increasing relative costs.
  - opportunity costs of production for both goods.
  - normative beliefs.
  - zero-sum games.
  - levels of investment.

ANS: B                      DIF: Easy                      REF: Comparative Advantage  
OBJ: 2.3                      MSC: Understanding

112. Someone has a comparative advantage in producing a good whenever
- one enjoys producing that good.
  - one can produce more of the good than someone else using the same resources.
  - one's opportunity cost is constant.
  - one's opportunity cost of producing that good is lower than that of other producers.
  - one has specific training in the production of that good.

ANS: D                      DIF: Easy                      REF: Comparative Advantage  
OBJ: 2.3                      MSC: Remembering

113. Mrs. Abel has a comparative advantage in producing cabbage if, in comparison to Mr. Lace, Mrs. Abel can grow cabbage
- with less labor.
  - with fewer inputs.
  - at a lower equilibrium.
  - at a lower opportunity cost.
  - with less technology.

ANS: D                      DIF: Easy                      REF: Comparative Advantage  
OBJ: 2.3                      MSC: Applying

114. If Kingsley can sell paper at a lower opportunity cost than Todrick, then \_\_\_\_\_ has a(n) \_\_\_\_\_ advantage in paper sales.
- a. Kingsley; absolute
  - b. Todrick; absolute
  - c. Kingsley; positive
  - d. Kingsley; comparative
  - e. Todrick; comparative

ANS: D                      DIF: Easy                      REF: Comparative Advantage  
 OBJ: 2.3                      MSC: Applying

115. Suppose Hoda is a brilliant attorney who can draft especially persuasive legal briefs. She also happens to possess some excellent administrative skills such as typing, filing, assembling binders and notes, and making reservations. Which best describes whether Hoda should hire an administrative assistant to help her?
- a. Hoda should not hire an administrative assistant because she has an absolute advantage in performing administrative functions.
  - b. Hoda should not hire an administrative assistant because she likely has a comparative advantage in performing administrative functions.
  - c. Hoda should hire an administrative assistant because the assistant would likely have an absolute advantage in writing legal briefs.
  - d. Hoda should hire an administrative assistant because the assistant would likely have a comparative advantage in performing administrative functions.
  - e. Hoda should hire an administrative assistant because the assistant would likely have a comparative advantage in writing legal briefs.

ANS: D                      DIF: Difficult                      REF: Comparative Advantage  
 OBJ: 2.3                      MSC: Applying

116. For both parties to benefit from specialization and trade, the trading parties must agree on
- a. a price somewhere between their opportunity costs of production.
  - b. a plan not to trade with other parties.
  - c. who has the absolute advantage in production.
  - d. the appropriate level of investment for the future.
  - e. the source of comparative advantage.

ANS: A                      DIF: Moderate                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Understanding



117. Suppose that Lo and Manuel can either run errands or wash dishes. Their maximum outputs per hour are listed in the following table. Given the same quantity of resources, at what terms of trade (relative price ratio) could they specialize and trade so that both consume outside their own production possibilities frontiers (PPFs)?

	<b>Errands Run</b>	<b>Opportunity Cost of 1 Errand</b>	<b>Dishes Washed</b>	<b>Opportunity Cost of 1 Dish Washed</b>
Lo	1	60 dishes	60	1/60 errand
Manuel	3	15 dishes	45	1/15 errand

- a. 1 errand run per 75 dishes washed      d. 1 errand run per 10 dishes washed  
 b. 1 errand run per 30 dishes washed      e. 1 errand run per 6 dishes washed  
 c. 1 errand run per 12 dishes washed

ANS: B      DIF: Moderate      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3      MSC: Applying

118. Suppose that Leslie and Hussein can either make salads or grill steaks. Their maximum outputs per hour are listed in the following table. Given the same quantity of resources, at what terms of trade (relative price ratio) could they specialize and trade so that both consume outside their own production possibilities frontiers (PPFs)?

	<b>Maximum Number of Salads</b>	<b>Opportunity Cost of 1 Salad</b>	<b>Maximum Number of Steaks</b>	<b>Opportunity Cost of 1 Steak</b>
Leslie	9	1/3 steak	3	3 salads
Hussein	12	1/2 steak	6	2 salads

- a. 1 salad per 1 steak      d. 3 salads per 1 steak  
 b. 2 salads per 1 steak      e. 3.5 salads per 1 steak  
 c. 2.5 salads per 1 steak

ANS: C      DIF: Moderate      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3      MSC: Analyzing

119. Consumer goods

- a. are produced today to be used to produce more goods in the future.  
 b. are produced today to be consumed at some point in the future.  
 c. are invested today in order to consume more today.  
 d. are produced today to be consumed today.  
 e. generate economic growth.

ANS: D      DIF: Easy      REF: Consumer Goods, Capital Goods, and Investment  
 OBJ: 2.4      MSC: Remembering

120. Goods that are produced now so that they can be used to produce other goods in the future are called \_\_\_\_\_ goods.

- a. capital
- b. consumer
- c. investment
- d. normal
- e. opportunity

ANS: A                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Remembering

121. Goods that are produced for current consumption are called \_\_\_\_\_ goods.

- a. capital
- b. consumer
- c. investment
- d. normal
- e. opportunity

ANS: B                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

122. Goods that are produced today in order to make other valuable goods and services in the future are called \_\_\_\_\_ goods.

- a. normal
- b. inferior
- c. consumer
- d. capital
- e. personal

ANS: D                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Remembering

123. Forgoing current consumption so that those resources can be used to produce new capital is called

- a. absolute advantage.
- b. comparative advantage.
- c. investment.
- d. scarcity.
- e. saving.

ANS: C                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

124. The process of using current resources to create or buy new capital is called

- a. absolute advantage.
- b. comparative advantage.
- c. investment.
- d. the law of increasing relative cost.
- e. economic growth.

ANS: C                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Remembering

125. The process of using current resources to create new capital is

- a. absolute advantage.
- b. comparative advantage.
- c. specialization.
- d. investment.
- e. free.

ANS: D                      DIF: Easy                      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Remembering

126. The opportunity cost of every investment in capital goods is
- current consumption (consumer goods).
  - future consumption (capital goods today).
  - absolute advantage.
  - comparative advantage.
  - scarcity.

ANS: A                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

127. Over the last 20 years, countries such as India and China have
- consumed heavily with little regard for the future.
  - invested heavily and enjoyed significant economic growth.
  - eliminated the problem of scarcity.
  - produced outside their production possibilities frontiers (PPFs).
  - produced wholly for current consumption.

ANS: B                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

128. Is there an opportunity cost to increased investment in capital goods today?
- Yes, increased production of capital goods means fewer consumer goods today.
  - Yes, increased production of capital goods today means less economic growth in the future.
  - No, increased production of capital goods today does not mean fewer consumer goods today.
  - No, increased production of capital goods today guarantees more consumption today.
  - No, if society is producing at an efficient point on the production possibilities frontier (PPF), then there is no opportunity cost to investment in capital goods.

ANS: A                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

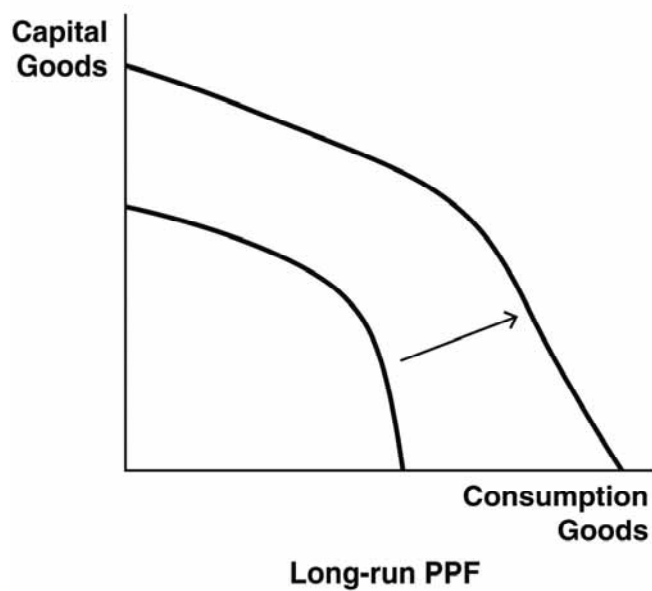
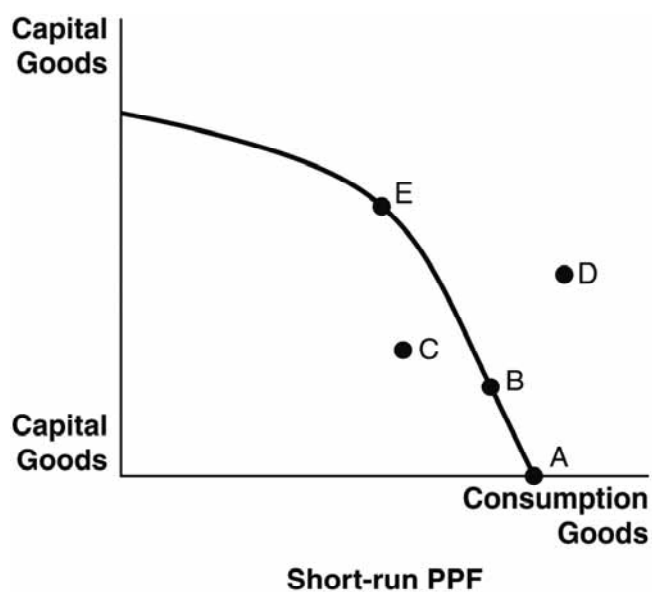
129. Greater investment in capital goods today leads to
- greater growth in the production possibilities frontier (PPF) in the future.
  - greater consumption today.
  - the end of scarcity.
  - less opportunity cost.
  - scarcity.

ANS: A                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

130. Which of the following would NOT lead to an outward shift of a future production possibilities frontier (PPF)?
- population growth
  - increased investment today
  - an increase in technology
  - the discovery of new resources
  - a decline in life expectancy

ANS: E                      DIF: Difficult      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Applying

Refer to the following figures to answer the next two questions.



131. Which allocation point in the short-run production possibilities frontier (PPF) will lead to no growth in the long-run PPF?
- a. point A
  - b. point B
  - c. point C
  - d. point D
  - e. point E

ANS: A  
OBJ: 2.4

DIF: Moderate  
MSC: Analyzing

REF: Consumer Goods, Capital Goods, and Investment

132. Which allocation point in the short-run production possibilities frontier (PPF) will lead to the most significant growth in the long-run PPF?

- a. point A
- b. point B
- c. point C
- d. point D
- e. point E

ANS: E                      DIF: Moderate              REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Analyzing

133. The usual purpose of an experiment is to

- a. test a model that is based on a hypothesis.
- b. turn a hypothesis into a theory.
- c. observe an interesting phenomenon.
- d. construct a model based on a hypothesis.
- e. formulate a hypothesis that explains a phenomenon.

ANS: A                      DIF: Moderate              REF: The Scientific Method in Economics  
OBJ: 2.1                      MSC: Understanding

134. For a phenomenon to be investigated by means of experiments, the phenomenon must

- a. involve human beings.
- b. have observable effects.
- c. have occurred in the past.
- d. be well understood.
- e. be quantitatively measurable.

ANS: B                      DIF: Difficult              REF: The Scientific Method in Economics  
OBJ: 2.1                      MSC: Analyzing

135. Which of the following is an important characteristic of good economic models?

- a. They deal with the economy as a whole.
- b. They use the language of mathematics.
- c. They are flexible in their designs.
- d. They avoid making predictions.
- e. They are as complex as the realities they represent.

ANS: C                      DIF: Moderate              REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

136. Wilbur and Orville Wright's testing of wing designs in a wind tunnel is an example of using

- a. observations to construct models.
- b. hypotheses to test observations.
- c. a theory to formulate hypotheses.
- d. models to collect data.
- e. data to make predictions.

ANS: D                      DIF: Moderate              REF: Economic Models  
OBJ: 2.1                      MSC: Understanding

137. Which faulty assumption by banks led to the Great Recession that began in 2007?
- a. that inflation would always remain low
  - b. that the U.S. government would always pay its debts
  - c. that stock prices would never drop
  - d. that the dollar would always be strong against other currencies
  - e. that real estate prices would always rise

ANS: E                      DIF: Moderate      REF: Economic Models  
OBJ: 2.1                      MSC: Remembering

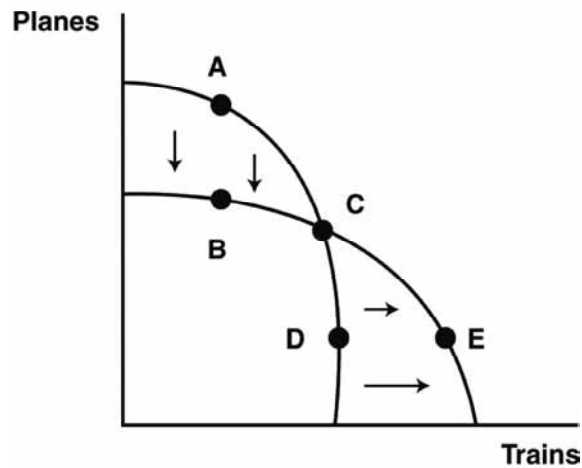
138. Economic growth is, by definition, an increase in the
- a. ability to produce goods.
  - b. number of participants in the workforce.
  - c. demand for goods.
  - d. average citizen's standard of living.
  - e. average worker's salary.

ANS: A                      DIF: Easy  
REF: The Production Possibilities Frontier and Economic Growth  
OBJ: 2.2                      MSC: Remembering

139. Which scenario represents economic contraction?
- a. an outward shift of the PPF
  - b. an inward shift of the PPF
  - c. upward movement along the PPF
  - d. downward movement along the PPF
  - e. straightening of the curve of the PPF

ANS: B                      DIF: Easy  
REF: The Production Possibilities Frontier and Economic Growth  
OBJ: 2.2                      MSC: Understanding

The figure depicts a shift in a society's production possibilities frontier (PPF) for the manufacture of trains and planes: train-manufacturing capacity expands while plane-manufacturing capacity shrinks. Refer to this figure to answer the next four questions.



140. Which point represents a new production possibility?
- a. point A
  - b. point B
  - c. point C
  - d. point D
  - e. point E

ANS: E                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

141. Which point ceases to represent a production possibility?
- a. point A
  - b. point B
  - c. point C
  - d. point D
  - e. point E

ANS: A                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

142. Which point represents an efficient level of output both before and after the shift?
- a. point A
  - b. point B
  - c. point C
  - d. point D
  - e. point E

ANS: C                      DIF: Moderate  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

143. Which point represents an output that was efficient before the shift but is inefficient afterward?
- point A
  - point B
  - point C
  - point D
  - point E

ANS: D                      DIF: Difficult  
 REF: The Production Possibilities Frontier and Economic Growth  
 OBJ: 2.2                      MSC: Analyzing

*Consider the following scenario to answer the next three questions: Kukla makes tables, with an opportunity cost of 3 rugs per every 4 tables. Zola makes rugs, with an opportunity cost of 2 tables per every 3 rugs.*

144. Ollie proposes that Kukla give Zola 1 table in exchange for 2 rugs. What are Kukla's and Zola's reactions?
- Kukla likes the proposal, but Zola does not.
  - Zola likes the proposal, but Kukla does not.
  - Kukla and Zola both like the proposal.
  - Neither Kukla nor Zola likes the proposal.
  - Ollie's proposal is not feasible.

ANS: A                      DIF: Moderate                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Applying

145. Ollie proposes that Kukla give Zola 2 tables in exchange for 1 rug. What are Kukla's and Zola's reactions?
- Kukla likes the proposal, but Zola does not.
  - Zola likes the proposal, but Kukla does not.
  - Kukla and Zola both like the proposal.
  - Neither Kukla nor Zola likes the proposal.
  - Ollie's proposal is not feasible.

ANS: B                      DIF: Moderate                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Applying

146. Ollie proposes that Kukla give Zola 2 tables in exchange for 2 rugs. What are Kukla's and Zola's reactions?
- Kukla likes the proposal, but Zola does not.
  - Zola likes the proposal, but Kukla does not.
  - Kukla and Zola both like the proposal.
  - Neither Kukla nor Zola likes the proposal.
  - Ollie's proposal is not feasible.

ANS: C                      DIF: Moderate                      REF: Finding the Right Price to Facilitate Trade  
 OBJ: 2.3                      MSC: Applying



147. When an economy shifts away from production of consumer goods and toward production of capital goods, for the average worker this trade-off means
- a higher standard of living.
  - longer work hours.
  - a lower savings rate (as a percentage of income).
  - more leisure time.
  - more disposable income.

ANS: B                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Understanding

148. For what kind of society does a shift away from the production of capital goods and toward the production of consumer goods make sense?
- a society with a scarcity of natural resources
  - a society with a high unemployment rate
  - a society with a low per-capita income
  - a society with a large per-capita stock of capital goods
  - a society with a large population

ANS: D                      DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4                      MSC: Remembering

149. A poker player wins some cash. Which use of the money would most naturally be considered an investment?
- buying a round of drinks for everyone at a bar
  - using the money to play more poker
  - paying off debts owed to bookies
  - shopping for groceries
  - buying a book of tips for poker players

ANS: E                      DIF: Easy              REF: Economic Models  
OBJ: 2.4                      MSC: Applying

150. Why has India's economy grown faster than the United States' in recent years?
- India production has focused more on consumer goods.
  - India has lowered its population growth rate.
  - India has attained a higher standard of living than the United States.
  - India's production has focused more on capital goods.
  - India has placed more focus on its citizens' immediate needs.

ANS: D                      DIF: Moderate      REF: Economic Models  
OBJ: 2.4                      MSC: Remembering

**SHORT ANSWER**

1. Comment on the role of models in economics. What are the strengths and weaknesses of using them to explore the world around us?

ANS:

Models are important because they simplify a complex world to a level where we can consider a limited number of factors and identify important relationships between them. This simplified view of reality can give us a better understanding of the component parts. To keep models simple and understandable, we need to exclude many outside (exogenous) factors. If we exclude something that is highly important to the outcome, however, our model will not have good predictive power and won't help our understanding of the real world. A good model carefully excludes or filters out factors that will have little impact on the end result in an effort to better understand the main causal factors.

DIF: Moderate      REF: Economic Models

OBJ: 2.1

MSC: Understanding

2. How will a reduction in the national unemployment rate affect a nation's production possibilities frontier (PPF)?

ANS:

Unemployed labor resources mean that, as a society, we are not producing on our production possibilities frontier (PPF). A reduction in the unemployment rate generally means that more people are working. As these labor resources are being utilized, we can move from farther inside the PPF (in the inefficient range) toward the efficient points on the frontier itself. It does not cause the actual PPF to shift. To do that there would need to be an actual increase in resources, not just more use of existing resources. (A new baby boom generation or an increase in immigration is the kind of thing that could actually increase labor resources and shift the PPF outward.)

DIF: Moderate      REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Understanding

3. What assumptions do economists make when developing a production possibilities frontier (PPF)?

ANS:

To simplify the complexity of the real world, economists assume that there are only two goods that society can produce and that there are no changes in the amount of resources and technology. Also, time is fixed and all resources are used fully and efficiently. None of these assumptions are actually true; we can discover new resources or see nature destroy existing ones, we invent new technologies, and (most important) we live in a world where there are more than two things that we can produce and consume. Nevertheless, the PPF gives us important insights into the trade-offs we face as we make production decisions and provides insights into the concepts of comparative advantage, specialization, efficiency, scarcity, and trade.

DIF: Difficult      REF: What Is a Production Possibilities Frontier?

OBJ: 2.2

MSC: Understanding

4. What does it mean when society is operating inside the production possibilities frontier (PPF)?

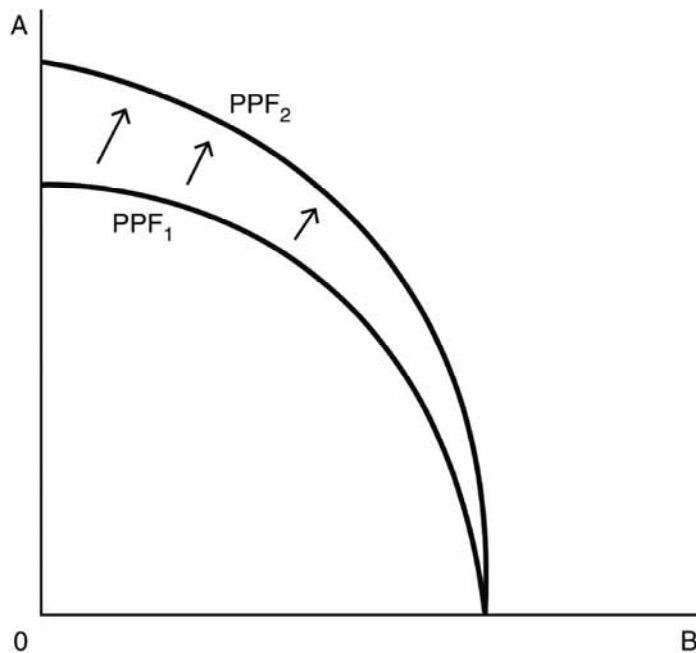
ANS:

The society is not fully utilizing all of its resources; it is operating in the inefficient range of the PPF. This could be caused by unemployed workers, unused productive capacity, or unmotivated workers. Anything that prevents productive resources from being fully or efficiently employed in making goods and services pushes society inside its PPF. With better management, the society can have more of both goods without having to give up any current production of either.

DIF: Moderate      REF: What Is a Production Possibilities Frontier?  
OBJ: 2.2      MSC: Understanding

5. Draw a production possibilities frontier (PPF) for good A and good B. Suppose that these goods are subject to increasing relative costs in production, and be sure that your graph reflects this fact. Now suppose that a new and innovative technology enhances the production of good A but not good B. Illustrate how this new innovation changes the production possibilities frontier (PPF).

ANS:



DIF: Difficult      REF: The Production Possibilities Frontier and Opportunity Cost  
OBJ: 2.2      MSC: Analyzing

6. Explain how scarcity is the root cause of the trade-offs and opportunity cost illustrated in the production possibilities frontier (PPF).

ANS:

The PPF shows the maximum attainable combinations of two goods given efficient use of fixed resources and technology. Without scarcity, we can all have as much of everything as we want; there is no need to choose (illustrated as a point beyond the PPF). There are no trade-offs, no constraints, and no frontiers. It is only because of the economic condition of scarcity that we are forced to choose how to allocate our resources to produce at a specific point on the PPF. Opportunity cost, the giving up of one thing to get more of another, is a direct result of the need to choose, which is created by scarcity.

DIF: Difficult

REF: The Production Possibilities Frontier and Opportunity Cost

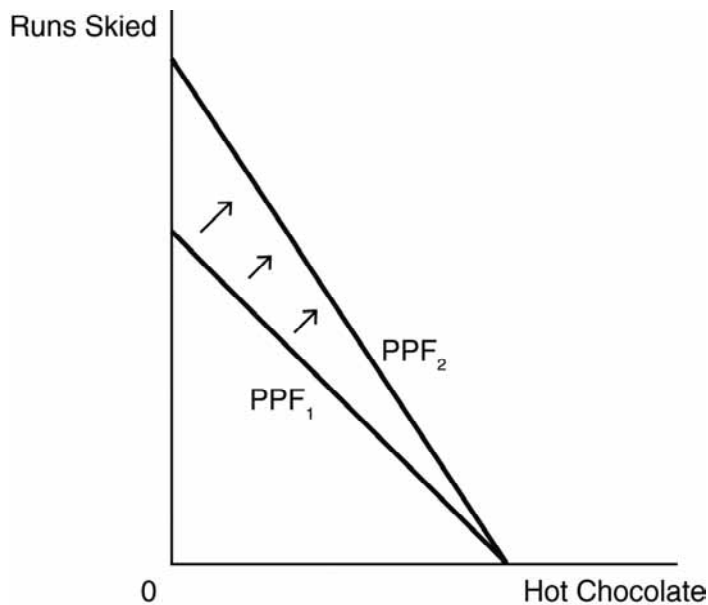
OBJ: 2.2

MSC: Understanding

7. Suppose that, during an afternoon at Hambre's favorite ski resort, Hambre could either make additional runs down the slopes or produce and sip hot chocolate by the fire in the lodge. Draw a production possibilities frontier (PPF) that describes his production trade-offs between runs skied (by riding the chairlift to the top and skiing down the slope) versus cups of hot chocolate produced and sipped. Hambre's production of each of these goods is subject to constant marginal opportunity costs in production, so be sure that, in the graph, the opportunity cost of one activity in terms of the other is the same at any point on the PPF.

Now suppose that a new superfast ski lift reduces the time it takes to get to the top of the mountain. Show, on the same graph, how this changes the PPF.

ANS:



DIF: Moderate

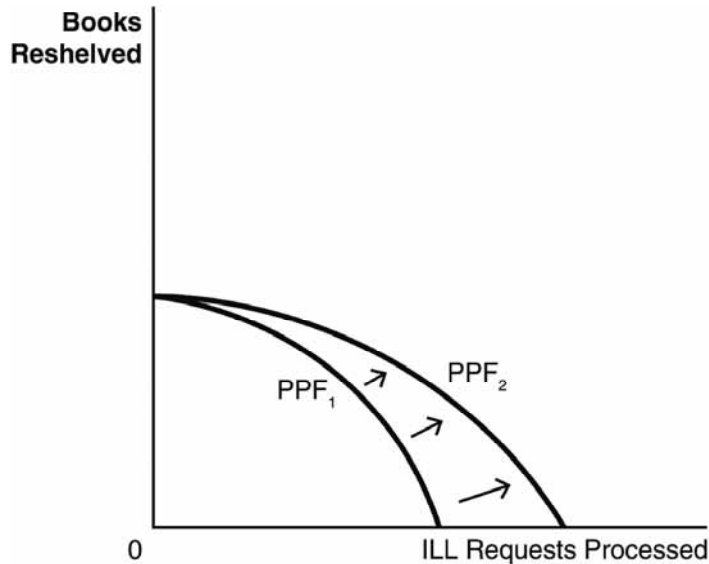
REF: The Production Possibilities Frontier and Economic Growth

OBJ: 2.2

MSC: Analyzing

8. Suppose that during Coco's afternoon shift working at the library, she could either reshelve books or process interlibrary loan (ILL) requests. Draw a production possibilities frontier (PPF) that describes Coco's production trade-offs. Her production of each of these goods is subject to increasing relative costs in production, so be sure that the graph reflects this fact. Now suppose that a new online request system increases Coco's efficiency at processing ILL requests but does not affect her reshelving ability. Show, on the same graph, how this new innovation changes the PPF.

ANS:

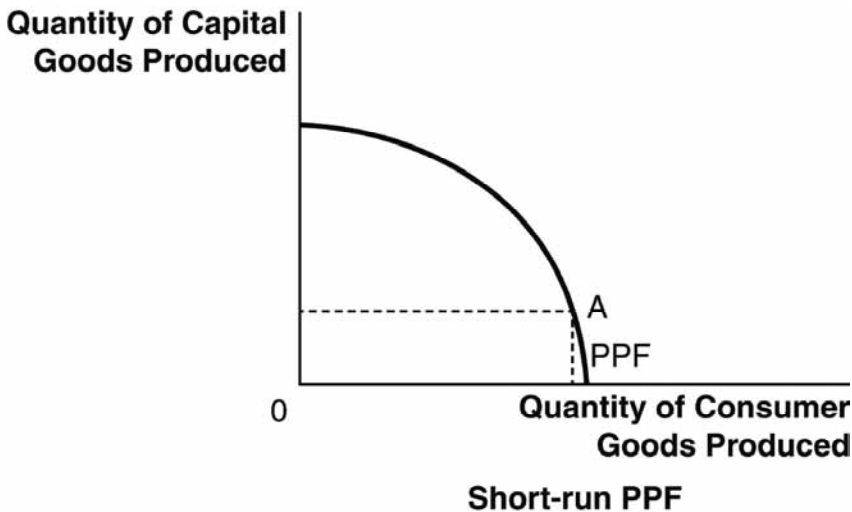


DIF: Moderate  
OBJ: 2.2

REF: The Production Possibilities Frontier and Economic Growth  
MSC: Analyzing

9. Draw a production possibilities frontier (PPF) that shows a pizza shop's production trade-offs between producing pizzas and stromboli. Suppose the pizza shop upgrades to a larger, more automated oven. On the same graph, show how the PPF changes. (The oven is used to bake both pizzas and stromboli.)

ANS:



DIF: Moderate  
OBJ: 2.2

REF: The Production Possibilities Frontier and Economic Growth  
MSC: Analyzing

10. Kristen is planning to add new mulch to all the landscaping beds around her house. She has determined the quantity of mulch she will need and identified these two options for getting the mulch to her house:
1. Kristen can have all the mulch delivered to her yard in one dump truck for \$450.
  2. Kristen can make four trips to the garden center with her pickup truck and haul it herself. It will cost her \$75 per load for the mulch, plus \$25 in fuel and truck wear per load. She estimates it will take about five hours to haul and unload all four loads.

What is the full cost of each method? Which method is cheaper? How is opportunity cost relevant?

ANS:

Hauling the mulch herself would cost \$100 per load times four loads, or \$400 out of pocket. That amount doesn't account, however, for the opportunity cost of Kristen's time to haul and unload the mulch herself. The full cost of self-delivery should account for her time. The difference in the monetary cost of hauling herself (\$400) versus delivery (\$450) is \$50. If the opportunity cost of Kristen's time is greater than \$10 per hour, she should have the mulch delivered. If her time is worth less than \$10 per hour, it is cheaper to haul it herself.

DIF: Difficult  
MSC: Analyzing

REF: Gains from Trade

OBJ: 2.3

11. How can a person who is “better” or more efficient (in that he or she has an absolute advantage in the production of various goods on the PPF) at producing several things be made even better off by specialization and trade?

ANS:

It sometimes seems counterintuitive that someone who has an absolute advantage in producing many things could be made better off by trading with less efficient producers. By producing the good or service in which you have the lowest opportunity cost and by letting others specialize in the things in which they have a lower opportunity cost, societal production can be maximized. Then, with mutually beneficial voluntary trade, market participants can consume a bundle of goods outside their own production possibilities frontiers (PPFs). In other words, they can consume more goods and services than they could produce and consume on their own. Regardless of each person’s level of skill or innovation, people are better off with trade than they would be if they all produced and consumed everything for themselves. Imagine what our standard of living would be like if we each had to grow all our own food, build our own shelters, and make our own clothes.

DIF: Moderate

REF: Comparative Advantage

OBJ: 2.3

MSC: Evaluating

12. The existing entries in the following table show the maximum quantities of milk shakes or fruit smoothies the college president and dining hall staffer could make during an afternoon shift, given a fixed amount of resources.

a. Fill in the remaining part of the table (be sure to label the units) and answer the questions below.

	<b>Number of Milk Shakes per Shift</b>	<b>Number of Smoothies per Shift</b>	<b>Opportunity Cost of 1 Smoothie</b>	<b>Opportunity Cost of 1 Milk Shake</b>
President	50	25		
Dining Hall Staffer	90	30		

- b. Who has a comparative advantage in producing smoothies?  
c. Who has an absolute advantage in producing milk shakes?

ANS:

a.

	<b>Number of Milk Shakes per Shift</b>	<b>Number of Smoothies per Shift</b>	<b>Opportunity Cost of 1 Smoothie</b>	<b>Opportunity Cost of 1 Milk Shake</b>
President	50	25	2 milk shakes	1/2 smoothie
Dining Hall Staffer	90	30	3 milk shakes	1/3 smoothie

- b. President has a comparative advantage in making smoothies (even though dining hall staffer has an absolute advantage).  
c. Dining hall staffer has an absolute advantage in producing milk shakes (and smoothies, too, as mentioned in answer B).

DIF: Moderate      REF: Comparative Advantage  
MSC: Analyzing

OBJ: 2.3



13. The table below shows the maximum number of burgers or hot dogs that Frances and Takeru can cook in one hour.

- a. Fill in the rest of the table with the opportunity cost of burgers and hot dogs for each person. Be sure to include the units.  
b. Identify who has a comparative advantage in producing each good.

	<b>Maximum Burgers</b>	<b>Maximum Hot Dogs</b>	<b>Opportunity Cost of 1 Burger</b>	<b>Opportunity Cost of 1 Hot Dog</b>
Frances	30	60		
Takeru	50	75		

ANS:

a.

	<b>Maximum Burgers</b>	<b>Maximum Hot Dogs</b>	<b>Opportunity Cost of 1 Burger</b>	<b>Opportunity Cost of 1 Hot Dog</b>
Frances	30	60	2 hot dogs	1/2 burger
Takeru	50	75	3/2 hot dogs	2/3 burger

- b. Takeru has a comparative advantage in making burgers, and Frances has a comparative advantage in making hot dogs.

DIF: Moderate      REF: Comparative Advantage      OBJ: 2.3  
MSC: Analyzing

14. Why might Shaquille O'Neal, a 7'1" former National Basketball Association (NBA) player, hire professional movers to help him move, even though his size and strength likely make him more proficient (better) at furniture moving than the professionals he may hire?

ANS:

Even today, Shaquille O'Neal has certain occupational opportunities, like being a professional basketball analyst, that most movers do not possess. This suggests that Shaq's opportunity cost may be greater than that of the professional movers, giving the movers a comparative advantage. This was easily apparent when he was still actively playing in the NBA. Moving himself might have meant missing out on practice time, which is important for his continued high level of performance. Even now that he has retired, the things that he can do with his time (his opportunity cost) may be more valuable than what the movers give up, which still gives the movers a comparative advantage. Because of this, Shaq would be better off hiring movers even if he has an absolute advantage in moving his possessions.

DIF: Moderate      REF: Comparative Advantage      OBJ: 2.3  
MSC: Evaluating

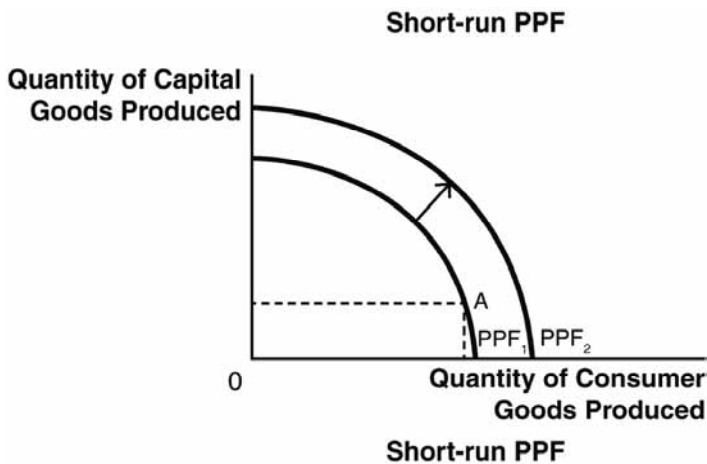
15. Why doesn't our society invest more resources into the production of capital goods to enhance the level of growth in our future production possibilities frontier (PPF)?

ANS:

Capital goods are great because they lead to economic growth. Consumer goods are great because we get satisfaction now. Production of either one comes at an opportunity cost; in a world of scarce resources we have to give up current consumption in order to produce capital goods. It may be that the political process or our own biases and time preferences sometimes distort the allocation of resources between present consumption and investment in capital for the future, but it is not the case that it is always better to invest more for the future. Consumers also value current consumption. Ultimately, it depends on the marginal benefit versus the marginal cost of the actual capital and consumption production point.

DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4          MSC: Evaluating

16. In the movie *A Knight's Tale*, three peasants win a jousting tournament and must decide whether they should enjoy most of their winnings now or use most of it for training to improve their future jousting performances. Use appropriate production possibilities frontiers (PPFs) and words to describe the investment trade-off they face.



ANS:

This is a classic example of the trade-off between the present and the future. If the peasants spend most of their winnings to live well now, they greatly value their current consumption, or consume at point A on the short-run PPF graph above.

If they choose to invest more of their winnings to train to become better jousters in the future, and perhaps win more over the long run, they will consume at point B on the short-run PPF graph. The investment leads to greater growth of the long-run PPF, as seen in the graph above.

DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4          MSC: Analyzing

17. Is it always better to forgo current consumption in order to invest more in capital goods that will provide more growth in society's production possibilities frontier (PPF) and make us better off in the future?

ANS:

No, it is not always better to forgo current consumption in order to invest for the future. Economic growth is great; most of us would like to see increases in society's ability to produce and are willing to sacrifice some current consumption in order to make the capital goods today that make future growth possible. However, we also value current consumption. If we produced only capital goods today, there would be no food, clothing, shelter, entertainment, and so forth available for current consumption. Because the opportunity cost of producing additional capital goods is current consumption, it is not the case that investing in capital goods is always preferred.

DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4      MSC: Evaluating

18. Physicists can conduct experiments to study subatomic particles, even though no one has ever seen or photographed a subatomic particle. Experimental psychologists can study emotions, even though no one has ever seen or photographed an emotion. How can there be experiments in these areas of study? What are the implications for the science of economics?

ANS:

Experiments don't require that every aspect of a phenomenon be visible to the naked eye. What is required is that the phenomenon produce some observable effect. Subatomic particles leave trails in a bubble chamber. Emotions produce characteristic facial expressions and characteristic ways of talking and behaving. In the same way, one cannot directly observe demand. But one can observe people's purchasing behaviors at different price points for a good.

DIF: Difficult      REF: The Scientific Method in Economics  
OBJ: 2.1      MSC: Evaluating

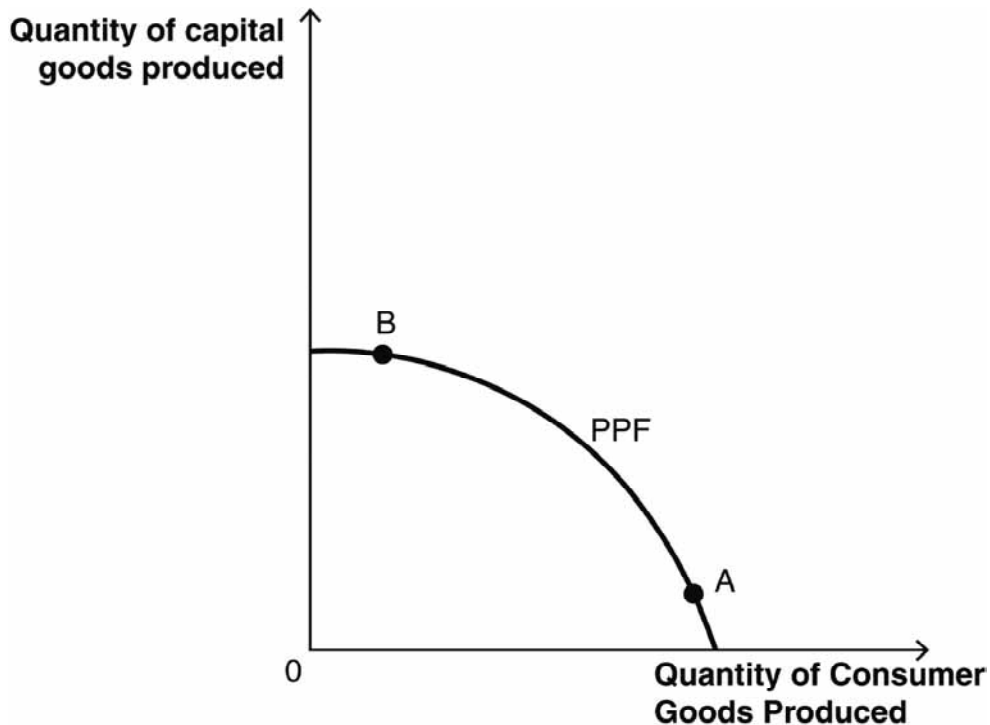
19. Explain why, ultimately, the opportunity cost of producing consumer goods instead of capital goods must be defined in terms of consumer goods.

ANS:

Initially, the opportunity cost of producing consumer goods is the nonproduction of capital goods, because of a diversion of production resources. However, the value of capital goods is in their contribution to future production. If all that capital goods lead to is the production of more capital goods, that makes for an infinite regress. Ultimately, for capital goods to be valuable, they must lead to the production of consumer goods. So then, ultimately, the opportunity cost of producing consumer goods now is in terms of fewer consumer goods produced at some indefinite point in the future, because of fewer capital goods available to produce them.

DIF: Difficult      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4      MSC: Evaluating

20. Explain why, in the figure, a country might rather be at point B than at point A.



ANS:

The curve represents a production possibilities frontier, or PPF. Points A and B both represent efficient outputs—that is, full use of available production resources. But compared with point A, point B represents a choice to produce more capital goods and fewer consumer goods. This makes sense for a country with a shortage of capital goods, where potentially there would be a great demand for more consumer goods if only they could be produced and if only people could afford them. Focusing on the production of capital goods means more hardship for people in the short term, but in the long term it means a more productive economy, which provides more jobs and produces more consumer goods on which workers can spend their wages.

DIF: Moderate      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4      MSC: Understanding

21. Explain how trading of goods creates value without creating any new goods.

ANS:

A trade enables each party to obtain something more cheaply than would be possible without trading. For instance, a tomato farmer can obtain corn more efficiently by trading tomatoes for it than by planting and growing it. The time and resources saved in this way can be put to use making more goods, with the tomato farmer growing more tomatoes and the corn farmer, in turn, growing more corn. In this way, all parties end up producing more goods than they could without trade.

DIF: Difficult      REF: Specialization and Trade      OBJ: 2.3  
MSC: Analyzing

22. Why is the concept of *ceteris paribus* important for model building?

ANS:

*Ceteris paribus* means “other things being equal.” When a model predicts that a certain change in input conditions will produce a certain effect, this is only on the assumption that other parameters of the model remain fixed. For instance, the supply-and-demand model tells us that if demand for a good decreases, the price will drop. But this assumes that supply has not also decreased. For this reason, economists who formulate predictions based on observed cause-and-effect patterns must either ensure that other factors “remain equal” or else state that their predictions assume other factors to remain equal.

DIF: Easy

REF: Economic Models

OBJ: 2.1

MSC: Understanding

23. When economists use models to make predictions, faulty assumptions can have disastrous consequences. Why is “avoid making assumptions” not the solution to this problem? Use the concepts of endogenous and exogenous factors to explain.

ANS:

Economics studies human behavior, which is highly complex, so that any model has to be a highly simplified representation. The factors that are included in the model are called endogenous, but many factors have to be left out; they are called exogenous. Any choice to leave some factor out of the model involves the assumption that leaving that factor out doesn’t render the model useless. In other words, the choice of which factors to make endogenous and which ones exogenous involves assumptions about what is important. Since the choice is unavoidable, so is making assumptions.

DIF: Difficult

REF: Economic Models

OBJ: 2.1

MSC: Evaluating

24. When it comes to making ceramic plates and cups, Reza has a comparative advantage over Greta. When it comes to making knives, forks, and spoons, Greta has a comparative advantage over Reza. If Reza and Greta plan to engage in trade for mutual gain, does the concept of opportunity cost enable them to determine exactly what trading ratio of place settings to silverware sets they should use? Why or why not?

ANS:

Opportunity cost sets the range of trading ratios that would be acceptable to both Reza and Greta. When Reza gives Greta a batch of place settings, he must get back at least as much silverware as he could have made in the time it took to make the place settings. Conversely, Greta must get at least as much in the way of place settings as what she could have made in the time it took her to produce the silverware. But comparative advantage does not determine a unique trading ratio; that has to be decided by all the usual tools of bargaining, such as bluffing and arguments about what is fair.

DIF: Difficult

REF: Specialization and Trade

OBJ: 2.3

MSC: Analyzing

25. Even though person A has an absolute advantage over person B both at producing good X and at producing good Y, it can still make sense for persons A and B to engage in trade involving goods X and Y. Explain why this is so.

ANS:

In general, person B will have a comparative advantage over person A at producing one of the two goods. Suppose that good is X. Then B sacrifices fewer Ys to make an X than A does, and so it makes sense for B to produce Xs while leaving the production of Ys to A. This will maximize their combined output, and through trade they can ensure they each do at least as well as they would have done alone, while ending up with a bigger surplus.

DIF: Difficult      REF: Consumer Goods, Capital Goods, and Investment  
OBJ: 2.4      MSC: Evaluating