

Microeconomics: Principles, Applications, and Tools, 10e (O'Sullivan/Sheffrin/Perez)
Chapter 2 The Key Principles of Economics

2.1 The Principle of Opportunity Cost

1) The opportunity cost of something is:

- A) the cost of the labor used to produce it.
- B) what you sacrifice to get it.
- C) the price charged for it.
- D) the search cost required to find it.

Answer: B

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

2) The principle of opportunity cost:

- A) is more relevant for firms than for individuals.
- B) only refers to monetary payments.
- C) is only relevant in economics.
- D) is applicable to all decision-making.

Answer: D

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

3) The principle that the cost of something is equal to what is sacrificed to get it is known as the:

- A) marginal principle.
- B) principle of opportunity cost.
- C) principle of diminishing returns.
- D) reality principle.

Answer: B

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

4) The saying that "There's no such thing as a free lunch" refers to the:

- A) marginal principle.
- B) spillover principle.
- C) principle of opportunity cost.
- D) reality principle.

Answer: C

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

5) Jacinda quit her job as a blackjack dealer where she made \$42,000 per year to start her own florist business. Her business expenses are \$14,000 per year on rent, \$21,000 per year on supplies, and \$9,000 per year on part time help. As for her personal expenses, her apartment costs her \$12,000 per year and her personal bills are an extra \$6,000 per year. What is Jacinda's opportunity cost of running the business?

- A) \$104,000
- B) \$86,000
- C) \$62,000
- D) \$44,000

Answer: B

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

6) An unemployed individual decides to spend the day fishing. The opportunity cost of fishing is:

- A) the cost of bait and any other monetary expenses.
- B) zero, because the person doesn't have a job.
- C) the cost of bait, any other monetary expenses, and the value of the individual's wages while he was working.
- D) the cost of bait, any other monetary expenses, and the value of the best alternative use of the individual's time.

Answer: D

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 7) Suppose that you own a house. What is the opportunity cost of living in the house?
- A) There is no opportunity cost because you own the house.
 - B) There is no opportunity cost unless you could set up a business in the house.
 - C) The opportunity cost is the rent you could have received from a tenant if you didn't live there.
 - D) The opportunity cost is the cost of your monthly mortgage payment plus bills.

Answer: C

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 8) Steven lives in a big city where there is a shortage of parking spots. He has a parking spot in his driveway where he parks his car. Which of the following statements is most correct?

- A) Steven has a lower opportunity cost of owning a car than his neighbor, who must rent a parking spot.
- B) The opportunity cost of using the spot is zero, because Steven owns the house.
- C) The opportunity cost of using the parking spot is the price he could charge someone else for using the spot.
- D) The opportunity cost depends on how much Steven's mortgage payment is.

Answer: C

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 9) You rent a DVD of The Dark Knight Rises. The rental is for seven days and you watch the movie on the first day. You tell a friend about the film and your friend asks to come over and watch the movie with you before it is due back. What is your opportunity cost if you decide to watch the movie a second time instead of going to a football game?

- A) the entire cost of the movie rental, since you have already watched the movie
- B) one half the rental cost, because you have already watched the movie one time
- C) zero, because you already paid for the rental
- D) the football game you forego by watching the movie again

Answer: D

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

10) Angelina, age seven, decides to dress up like Princess Fiona for Halloween. What is the opportunity cost of her decision?

- A) the cost of the costume
- B) the fact that she can't dress up like Dora the Explorer, her second choice
- C) zero, because seven-year-olds don't have opportunity costs
- D) the cost of the Lady Gaga costume which she did not want

Answer: B

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

11) Spending money on a new car instead of a used car when you are on a fixed budget is an example of:

- A) the incursion of an opportunity cost.
- B) isolating variables.
- C) a bad thing to do because you run out of money.
- D) living on the edge.

Answer: A

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

12) Suppose that your tuition to attend college is \$24,000 per year and you spend \$8,000 per year on room and board. If you were working full time, you could earn \$30,000 per year. What is your opportunity cost of attending college for one year?

- A) \$32,000
- B) \$38,000
- C) \$54,000
- D) \$62,000

Answer: C

Diff: 1

Topic: The Cost of College

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

13) Suppose that your tuition to attend college is \$14,000 per year and you spend \$5,000 per year on room and board. If you were working full time, you could earn \$26,000 per year. What is your opportunity cost of attending college?

- A) \$19,000
- B) \$31,000
- C) \$40,000
- D) \$45,000

Answer: C

Diff: 1

Topic: The Cost of College

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

14) The opportunity cost of going to college:

- A) is zero if your parents pay your tuition.
- B) is equal to the cost of tuition, room and board, and other expenses.
- C) includes wages you lose by going to school instead of working.
- D) is the same for all students at a particular school who pay full tuition.

Answer: C

Diff: 1

Topic: The Cost of College

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

15) You have an hour between your economics and math classes. What is the opportunity cost of that time if you use it to complete your math homework instead of your economics homework?

- A) the economics homework you could have completed
- B) the math homework you chose to complete
- C) the cost of your calculator and math textbook
- D) zero, because it doesn't cost any money to do your math homework

Answer: A

Diff: 2

Topic: The Cost of College

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

16) The sacrifices made by societies in order to engage in military spending represent:

- A) the nominal costs of military spending.
- B) the real costs of military spending.
- C) the opportunity costs of military spending.
- D) the excessive costs of military spending.

Answer: C

Diff: 1

Topic: The Cost of Military Spending

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

17) The trade-offs made by the U.S. government to fund the war in Iraq:

- A) prove that the government is spending too much on the war.
- B) show that the government is justified in its war spending.
- C) exceed the benefits derived from the war.
- D) represent what was potentially sacrificed to engage in the war.

Answer: D

Diff: 1

Topic: The Cost of Military Spending

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

18) According to the possible trade-off example between warships and drinking water in the text, the policy question that should be considered in Malaysia is:

- A) do the opportunity costs of the warships exceed their nominal costs?
- B) do the nominal costs of the warships exceed their real costs?
- C) do the benefits of the warships exceed their opportunity costs?
- D) do the real costs of the warships exceed their nominal costs?

Answer: C

Diff: 1

Topic: The Cost of Military Spending

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

Bath	Groom
0	6
7	5
13	4
18	3
22	2
25	1
27	0

Table 2.1

19) Kaitlyn and Larissa have formed a dog bathing and grooming business. The number of dogs they can bathe or groom in any given day is depicted in Table 2.1. The opportunity cost of grooming the first dog in a day is bathing _____ dog(s).

- A) 1
- B) 2
- C) 24
- D) 25

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

20) Kaitlyn and Larissa have formed a dog bathing and grooming business. The number of dogs they can bathe or groom in any given day is depicted in Table 2.1. The opportunity cost of grooming the third dog in a day is bathing _____ dog(s).

- A) 3
- B) 4
- C) 5
- D) 18

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

21) Kaitlyn and Larissa have formed a dog bathing and grooming business. The number of dogs they can bathe or groom in any given day is depicted in Table 2.1. The opportunity cost of grooming the sixth dog in a day is bathing _____ dog(s).

- A) 0
- B) 5
- C) 6
- D) 7

Answer: D

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

22) Kaitlyn and Larissa have formed a dog bathing and grooming business. The number of dogs they can bathe or groom in any given day is depicted in Table 2.1. As they groom more dogs, the opportunity cost of grooming additional dogs:

- A) falls.
- B) rises.
- C) remains constant.
- D) depends on the prices being charged.

Answer: B

Diff: 2

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

23) Kaitlyn and Larissa have formed a dog bathing and grooming business. The number of dogs they can bathe or groom in any given day is depicted in Table 2.1. As they groom more dogs, the opportunity cost of bathing additional dogs:

- A) falls.
- B) rises.
- C) remains constant.
- D) depends on the prices being charged.

Answer: A

Diff: 2

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

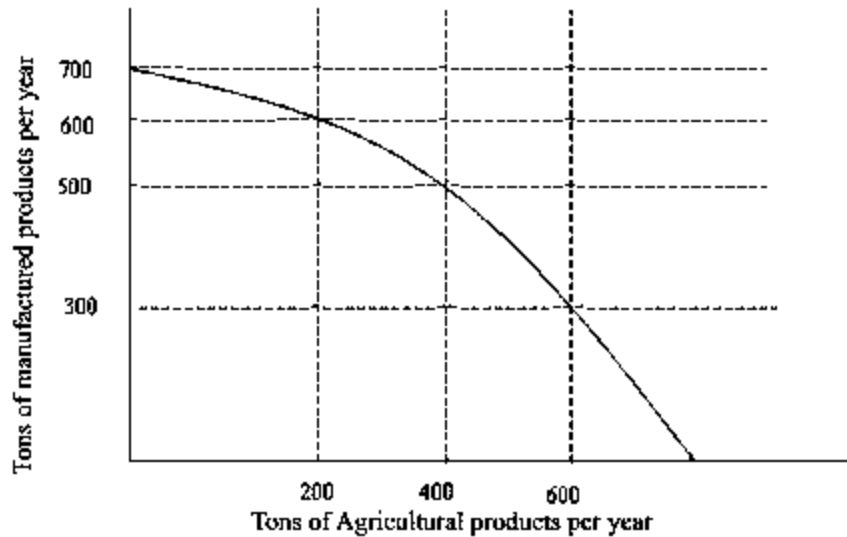


Figure 2.1

24) Referring to Figure 2.1, if you increase the production of agricultural goods, what other area is affected?

- A) the price of produce
- B) the production of manufactured goods
- C) how much people can purchase
- D) the wages earned by agricultural workers

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

25) The production possibilities curve in Figure 2.1 illustrates the notion of:

- A) increased factory goods production.
- B) increased agricultural production.
- C) diminishing resources.
- D) opportunity cost.

Answer: D

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

26) Refer to Figure 2.1. If you are producing 600 tons of agricultural products per year, what is the maximum amount of manufactured products you can produce per year?

- A) 300 tons
- B) 500 tons
- C) 600 tons
- D) 700 tons

Answer: A

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

27) Refer to Figure 2.1. If you choose to produce only agricultural products, what is the maximum quantity you can produce per year?

- A) 200 tons
- B) 400 tons
- C) 600 tons
- D) > 600 tons

Answer: D

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

28) Refer to Figure 2.1. What is the opportunity cost of increasing production of manufactured products from 500 tons to 600 tons per year?

- A) 200 tons of agricultural products per year
- B) 400 tons of agricultural products per year
- C) 500 tons of agricultural products per year
- D) 600 tons of agricultural products per year

Answer: A

Diff: 2

Topic: Opportunity Cost and the Production Possibilities Curve, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 29) If an economy is fully utilizing its resources, it can produce more of one product only if it:
- A) doubles manufacturing of the product.
 - B) produces less of another product.
 - C) adds more people to the labor force.
 - D) reduces the prices of the most expensive products.

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 30) If you remove resources from factory production, the quantity of factory goods will:

- A) increase.
- B) decrease.
- C) remain the same but their price will decrease.
- D) be diverted to other production.

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 31) If an economy is represented by a point inside its production possibilities curve:

- A) it can produce more of one product even if it does not produce less of another product.
- B) it can produce more of one product only if it produces less of another product.
- C) it cannot produce more of one product unless it stops producing the other product entirely.
- D) it cannot possibly produce more of one product, even if it produces less of another product.

Answer: A

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 32) If an economy is represented by a point along its production possibilities curve:
- A) it can produce more of one product even if it does not produce less of another product.
 - B) it can produce more of one product only if it produces less of another product.
 - C) it cannot produce more of one product unless it stops producing the other product entirely.
 - D) it cannot possibly produce more of one product, even if it produces less of another product.

Answer: B

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

- 33) Points outside the production possibilities curve represent combinations of products that are:
- A) attainable only if the economy's resources are fully employed.
 - B) attainable only if the economy's resources are not fully employed.
 - C) attainable if the economy's resources are either fully employed or not fully employed.
 - D) unattainable.

Answer: D

Diff: 1

Topic: Opportunity Cost and the Production Possibilities Curve

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

Recall the Application about running a software programming business to answer the following question(s).

- 34) The time and invested funds involved in starting a software (app) development business addresses the economic concept of:

- A) the marginal principle.
- B) opportunity cost.
- C) the real-nominal principle.
- D) the principle of diminishing returns.

Answer: B

Diff: 1

Topic: Application 1, Don't Forget the Costs of Time and Invested Funds

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

35) If by starting your own software development business you are forced give up your job as a janitor, then the income you could have earned as a janitor is:

- A) part of the opportunity cost of operating your software business.
- B) **not** part of the opportunity cost of operating your software business.
- C) part of the benefit of operating your software business.
- D) is an example of the principle of diminishing returns.

Answer: A

Diff: 1

Topic: Application 1, Don't Forget the Costs of Time and Invested Funds

Skill: Conceptual

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

36) The current income you would sacrifice to start your own software development business is part of the:

- A) opportunity cost of invested funds.
- B) opportunity cost of starting a business.
- C) cost of doing business.
- D) present value of your initial investment.

Answer: B

Diff: 1

Topic: Application 1, Don't Forget the Costs of Time and Invested Funds

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

37) If you have \$10,000 to start a software development business, the interest rate is 4 percent, your cost of your computer is \$5,000, and the earnings you sacrifice from working at another job are \$32,000, your yearly cost of doing business would be:

- A) \$47,000.
- B) \$47,400.
- C) \$37,400.
- D) \$37,000.

Answer: C

Diff: 2

Topic: Application 1, Don't Forget the Costs of Time and Invested Funds

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

38) A principle is a self-evident truth that most people readily understand and accept.

Answer: TRUE

Diff: 1

Topic: The Key Principles of Economics

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

39) Opportunity cost is the difference between the nominal and real cost of some action.

Answer: FALSE

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

40) The opportunity cost of something is the gain you receive as a result of your sacrifice.

Answer: FALSE

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

41) The opportunity cost of something is the nominal price paid for the product.

Answer: FALSE

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

42) Trade-offs involve an exchange of one thing for another because resources are limited and can be used in different ways.

Answer: TRUE

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

43) The notion of opportunity cost allows the measurement of trade-offs.

Answer: TRUE

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

44) In order to get his bachelor's degree, Timothy gave up an offer for a full time job as a bartender. Therefore, Timothy incurred an opportunity cost.

Answer: TRUE

Diff: 1

Topic: The Cost of College

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

45) The opportunity cost of going to a particular college is not the same for everyone.

Answer: TRUE

Diff: 1

Topic: The Cost of College

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

46) The cost of a bachelor's degree in philosophy equals the tuition plus the cost of room and board.

Answer: FALSE

Diff: 1

Topic: The Cost of College

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

47) What is an opportunity cost?

Answer: An opportunity cost is what you sacrifice to get something.

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

48) Suppose that you lend \$5,000 to a friend who pays you back \$5,400 the next year. Suppose that prices that year rose by six percent and the real rate of return in the stock market was five percent. Your friend says that he or she was being more than fair by giving you more than the rate of inflation as a return. What do you think?

Answer: The opportunity cost of that money was not just the six percent inflation, but also the real rate of return that would have been enjoyed had the money been put in the stock market. For you to have been indifferent between loaning your money versus keeping it, your friend should have reimbursed you by \$5,550, or an 11% return. This is another example of considering all the costs, both the loss in purchasing power of the money due to inflation and the implicit cost of the return that could have been earned if the money was invested in the stock market.

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

49) What is the opportunity cost of investing \$10,000 of your own money into a business you wish to start?

Answer: The opportunity cost of your \$10,000 is the monetary gain you forego because you cannot invest the money elsewhere.

Diff: 1

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

50) What do economists mean when they say that "there is no such thing as a free lunch?"

Answer: Everything has a cost, even when you do not pay money for it. Suppose that somebody bought you lunch. Resources from the economy were used to make that lunch, even though those resources may not belong to you. Consequently, the economy gave up anything else it could have made with the resources it used to make the lunch. The opportunity cost of that lunch is the lost opportunity to use those resources in some other way.

Diff: 2

Topic: The Principle of Opportunity Cost

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

51) What is the opportunity cost of your college degree?

Answer: A quick answer would be to say that the cost is the tuition, room and board, and books expenditures that are borne during the college years. But such a statement would be incorrect. First, it understates one aspect of costs: one is giving up income while a student. But it also overstates the costs in another dimension: people would eat and sleep somewhere regardless of their attendance in college. Therefore, one should not consider room and board to be part of the cost of college attendance.

Diff: 1

Topic: The Cost of College

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

2.2 The Marginal Principle

1) The extra benefit resulting from a small increase in an activity is called the:

- A) opportunity cost.
- B) marginal benefit.
- C) marginal cost.
- D) diminishing returns of the activity.

Answer: B

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

2) The additional cost resulting from a small increase in some activity is called the:

- A) opportunity cost.
- B) marginal benefit.
- C) marginal cost.
- D) diminishing returns of the activity.

Answer: C

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

3) The principle that individuals and firms pick the activity level where the incremental benefit of that activity equals the incremental cost of that activity is known as the:

- A) marginal principle.
- B) principle of opportunity cost.
- C) principle of diminishing returns.
- D) spillover principle.

Answer: A

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

4) The marginal principle implies that an individual should produce or consume where:

- A) marginal benefit exceeds marginal cost.
- B) marginal benefit is less than marginal cost.
- C) marginal benefit equals marginal cost.
- D) total benefit equals total cost.

Answer: C

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

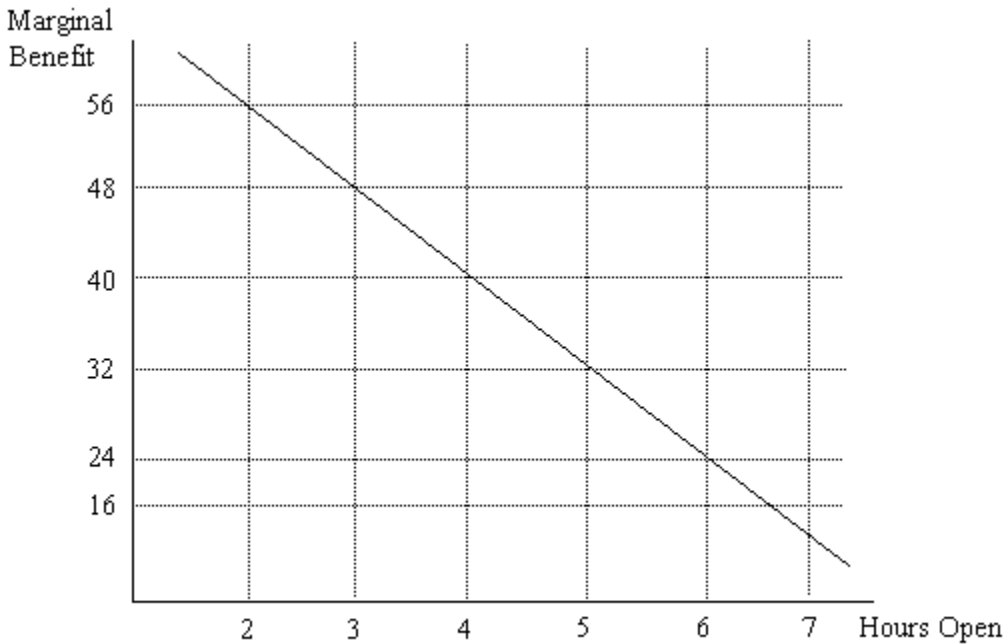


Figure 2.2

5) Joe runs a business and needs to decide how many hours to stay open. Figure 2.2 illustrates his marginal benefit of staying open for each additional hour. Suppose that Joe's marginal cost of staying open per hour is \$24. How many hours should Joe stay open?

- A) 3 hours
- B) 4 hours
- C) 5 hours
- D) 6 hours

Answer: D

Diff: 1

Topic: The Marginal Principle, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

6) Joe runs a business and needs to decide how many hours to stay open. Figure 2.2 illustrates his marginal benefit of staying open for each additional hour. Suppose that Joe's marginal cost of staying open per hour is \$32. How many hours should Joe stay open?

- A) 4 hours
- B) 5 hours
- C) 6 hours
- D) 7 hours

Answer: B

Diff: 1

Topic: The Marginal Principle, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

7) Joe runs a business and needs to decide how many hours to stay open. Figure 2.2 illustrates his marginal benefit of staying open for each additional hour. Suppose that we observe Joe staying open 5 hours per day. If he is following the marginal principle, what must his marginal cost per hour be?

- A) \$16
- B) \$24
- C) \$32
- D) \$40

Answer: C

Diff: 1

Topic: The Marginal Principle, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

8) Joe runs a business and needs to decide how many hours to stay open. Figure 2.2 illustrates his marginal benefit of staying open for each additional hour. Suppose that we observe Joe staying open 3 hours per day. If he is following the marginal principle, what must his marginal cost per hour be?

- A) \$24
- B) \$32
- C) \$40
- D) \$48

Answer: D

Diff: 1

Topic: The Marginal Principle, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

9) Joe runs a business and needs to decide how many hours to stay open. Figure 2.2 illustrates his marginal benefit of staying open for each additional hour. Suppose that we observe Joe staying open 6 hours per day. If he is following the marginal principle, what must his marginal cost per hour be?

- A) \$16
- B) \$24
- C) \$32
- D) \$48

Answer: B

Diff: 1

Topic: The Marginal Principle, graphing

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

Hours of Operation	Marginal Cost
1	6
2	12
3	18
4	24
5	30
6	36
7	42

Table 2.2

10) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that Krystal's marginal benefit of staying open per hour is \$30. If she is following the marginal principle, how many hours should Krystal stay open?

- A) 4 hours
- B) 5 hours
- C) 6 hours
- D) 7 hours

Answer: B

Diff: 1

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

11) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that Krystal's marginal benefit of staying open per hour is \$18. If she is following the marginal principle, how many hours should Krystal stay open?

- A) 3 hours
- B) 4 hours
- C) 6 hours
- D) 7 hours

Answer: A

Diff: 1

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

12) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that we observe Krystal staying open 4 hours per day. If she is following the marginal principle, what must her marginal benefit be?

- A) \$12
- B) \$18
- C) \$24
- D) \$30

Answer: C

Diff: 1

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

13) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that we observe Krystal staying open 2 hours per day. If she is following the marginal principle, what must her marginal benefit be?

- A) \$6
- B) \$12
- C) \$15
- D) \$18

Answer: B

Diff: 1

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

14) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that we observe Krystal staying open 5 hours and her marginal benefit of staying open per hour is \$18. If she is following the marginal principle, Krystal should:

- A) stay open 2 more hours.
- B) stay open 3 more hours.
- C) stay open 2 fewer hours.
- D) stay open 3 fewer hours.

Answer: C

Diff: 2

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

15) Krystal runs a nail salon and needs to decide how many hours to stay open. Table 2.2 illustrates her marginal costs of staying open for each additional hour. Suppose that we observe Krystal staying open 5 hours and her marginal benefit of staying open per hour is \$36. If she is following the marginal principle, Krystal should:

- A) stay open 1 more hour.
- B) stay open 2 more hours.
- C) stay open 1 fewer hour.
- D) stay open 2 fewer hours.

Answer: A

Diff: 2

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

16) Considering how a change in one variable affects the value of another variable is called:

- A) the Peter Principle.
- B) the marginal principle.
- C) the principle of supply and demand.
- D) functional decision making.

Answer: B

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

17) When referring to "marginal" changes, the economic focus is on:

- A) changes which affect only a few people or products.
- B) large changes on the low end.
- C) graduated changes on the high end.
- D) small or incremental changes.

Answer: D

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

18) When deciding whether to engage in an activity or how much to do, people should follow:

- A) the principle of microeconomics.
- B) the principle of macroeconomics.
- C) the marginal principle.
- D) the law of supply and demand.

Answer: C

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

Recall the Application about the best speed at which to sail an ocean cargo ship to answer the following question(s).

19) Weighing the benefits and costs of the different speeds at which to sail an ocean cargo ship addresses the economic concept known as:

- A) the principle of opportunity cost.
- B) the marginal principle.
- C) the principle of voluntary exchange.
- D) the principle of diminishing returns.

Answer: B

Diff: 1

Topic: Application 2, How Fast to Sail?

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

20) Sailing an ocean cargo ship slower to save on the expense of fuel as opposed to sailing it faster to save time and therefore allow it to make more deliveries makes sense if the _____ of sailing slower is less than the _____ of sailing faster.

- A) marginal benefit; marginal cost
- B) marginal cost; marginal benefit
- C) marginal benefit; opportunity cost
- D) marginal cost; opportunity cost

Answer: B

Diff: 1

Topic: Application 2, How Fast to Sail?

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

21) The use of seat belts and other automobile safety features making bicycling more hazardous can be explained by the economic concept known as:

- A) the real-nominal principle.
- B) the marginal principle.
- C) the principle of voluntary exchange.
- D) the principle of diminishing returns.

Answer: B

Diff: 1

Topic: Driving Speed and Safety

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

22) Saving time by driving faster is an example of a _____ of driving faster. Increasing the severity of injuries from a potential accident due to driving faster is a(n) _____ of driving faster.

- A) nominal cost; real cost
- B) marginal cost; nominal cost
- C) marginal benefit; marginal cost
- D) normative benefit; opportunity cost

Answer: C

Diff: 1

Topic: Driving Speed and Safety

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

23) When applying the marginal principle, you should pick the level at which the activity's marginal benefit equals its marginal cost.

Answer: TRUE

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

24) When applying the marginal principle, you should pick the level at which the activity's marginal benefit is less than its marginal cost.

Answer: FALSE

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

25) Basically, the marginal principle helps us to evaluate the factors involved in taking an action or if doing something is worth the effort.

Answer: TRUE

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

26) When Lonnie produces 1 pair of cowboy boots his costs total \$300. When he produces 2 pairs of cowboy boots his total costs are \$500. This means that Lonnie's marginal cost of producing the second pair of cowboy boots is \$200.

Answer: TRUE

Diff: 2

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

27) Economists argue that individuals should continue to consume until total benefit equals total cost.

Answer: FALSE

Diff: 1

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

28) If a company's total costs per day increase from \$200 to \$400 by adding another worker, but its additional benefits are \$300, it is sensible to add that additional worker.

Answer: TRUE

Diff: 2

Topic: The Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

29) What is a marginal cost?

Answer: A marginal cost is the additional cost resulting from a small increase in the production of a good.

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

30) What is a marginal benefit?

Answer: A marginal benefit is the additional benefit resulting from a small increase in the production of a good.

Diff: 1

Topic: The Marginal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

31) When a firm hired its tenth worker, its factory output increased by four units per month. Would you expect the firm's output to increase by eight more units per month if the firm hired two more workers?

Answer: No. The principle of diminishing marginal returns suggests that after some point of increasing returns, each incremental worker should have a progressively lower level of marginal productivity.

Diff: 2

Topic: Marginal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

32) Consider a firm that is trying to determine how many hours to remain open in a day. How would the firm make this decision?

Answer: The firm would continue to stay open as long as the marginal benefit of staying open (say, the increased revenues) each extra hour exceeds (or at least equals) the incremental, or marginal, costs (e.g., electricity, wages, etc.) incurred from staying open that hour.

Diff: 2

Topic: Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

33) Different people eat different amounts of food when they go to buffet restaurants, even though they all pay the same price. Explain how this relates to the marginal principle.

Answer: The marginal monetary cost of eating more is zero, so people will eat until they would not enjoy eating another bite. There is an implicit cost of eating more once you are full (such as extra weight gain and physical discomfort). Therefore, people will eat until the marginal benefit equals the marginal cost, and this will occur at different amounts of food for different people.

Diff: 2

Topic: The Marginal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

34) Use the marginal principle to explain why government mandated safety features in automobiles during the 1960s and 1970s resulted in an increase in collisions between automobiles and bicycles.

Answer: The mandated safety features decreased the marginal cost of speed: People who wear seat belts suffer less severe injuries in a collision, so every additional unit of speed is less costly to the driver. Drivers felt more secure because they were better insulated from harm in the event of a collision, and so they drove faster. As a result, the number of collisions between cars and bicycles increased, meaning that a safer environment for drivers led to a more hazardous environment for bicyclists.

Diff: 2

Topic: Driving Speed and Safety

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-20: Apply the concepts of opportunity cost, marginal analysis, and present value to make decisions

2.3 The Principle of Voluntary Exchange

1) People acting in their own self interest is the basis of the:

- A) principle of supply and demand.
- B) principle of voluntary exchange.
- C) real-nominal principle.
- D) principle of scarcity.

Answer: B

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

2) The principle of voluntary exchange is based on the idea of:

- A) making assumptions.
- B) isolating variables.
- C) thinking at the margin.
- D) rational self-interest.

Answer: D

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

3) Who among the following stressed the importance the voluntary exchange as a distinctly human trait?

- A) Adam Smith
- B) Alfred Marshall
- C) John Keynes
- D) Karl Marx

Answer: A

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Fact

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

4) The alternative to voluntary exchange is:

- A) self-sufficiency.
- B) dependency.
- C) cooperation.
- D) marginal analysis.

Answer: A

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

Recall the Application about Rory McIlroy and weed-whacking to answer the following question(s). The Application assumes that Rory McIlroy could whack down all the weeds on his estate in one hour at an opportunity cost of \$1,000, but it would take 20 hours for a gardener to do it at a price of \$10 per hour.

5) This Application addresses the economic concept of:

- A) the marginal principle.
- B) diminishing returns.
- C) specialization and exchange.
- D) real versus nominal costs.

Answer: C

Diff: 1

Topic: Application 3, Rory McIlroy and Weed-Whacking

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-5: List ways in which governments intervene in markets and explain the consequences of such intervention

6) Based on the assumptions in the Application, should Rory hire a gardener or cut the weeds himself?

- A) He should hire the gardener because he would save \$1,000.
- B) He should hire the gardener because he would save \$800.
- C) He should cut the weeds himself because he would save \$200.
- D) He should cut the weeds himself because he would save \$1,000.

Answer: B

Diff: 2

Topic: Application 3, Rory McIlroy and Weed-Whacking

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

7) If Rory McIlroy only earned \$500 per hour playing golf instead of \$1,000 per hour, what should he do?

- A) He should still hire the gardener.
- B) He should do the weed-whacking himself.
- C) He should hire a less-productive gardener.
- D) He should be indifferent as to who does the weed-whacking, for the difference in hourly earnings would now be insignificant.

Answer: A

Diff: 2

Topic: Application 3, Rory McIlroy and Weed-Whacking

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

8) When you have a job and your employer compensates you for your time with money, resulting in both of you being better off, it is an example of a voluntary exchange.

Answer: TRUE

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

9) The principle of voluntary exchange is the concept that a voluntary exchange between two people makes both people better off.

Answer: TRUE

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

10) A "market" is an arrangement that allows people to exchange things.

Answer: TRUE

Diff: 1

Topic: Exchange and Markets

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

11) The alternative to voluntary exchange is self-sufficiency.

Answer: TRUE

Diff: 1

Topic: The Principle of Voluntary Exchange

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-3: Discuss different types of market systems and the gains that can be made from trade

2.4 The Principle of Diminishing Returns

1) The principle of diminishing returns implies that as one input increases while the other inputs are held fixed, output:

- A) increases at an increasing rate.
- B) increases at a decreasing rate.
- C) decreases at a decreasing rate.
- D) decreases at an increasing rate.

Answer: B

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

2) The principle that "as one input increases while the other inputs are held fixed, output increases at a decreasing rate" is known as the:

- A) marginal principle.
- B) principle of opportunity cost.
- C) principle of diminishing returns.
- D) spillover principle.

Answer: C

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

3) According to the principle of diminishing returns, if all factors of production but one are held constant and if that one factor is doubled, then eventually output will most likely:

- A) double too.
- B) less than double.
- C) more than double.
- D) remain unchanged.

Answer: B

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

4) A firm produces its product using both capital and labor. When it does not change its capital usage, but doubles its labor input, its output increases by less than 50 percent. Which of the following is the most likely explanation of this finding?

- A) the principle of opportunity cost
- B) the principle of diminishing returns
- C) the marginal principle
- D) the spillover principle

Answer: B

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

5) According to the principle of diminishing returns, if the number of workers is increased beyond the point of diminishing returns, then the additional worker:

- A) increases total output by the same amount as previous workers.
- B) increases total output by more than the amount of previous workers.
- C) increases total output by less than the amount of previous workers.
- D) decreases total output.

Answer: C

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

Units of Capital	Number of Workers	Output/Day
5	0	0
5	1	40
5	2	90
5	3	150
5	4	200
5	5	235

Table 2.3

6) Refer to Table 2.3. What can be observed about the given resources?

- A) Capital and labor are both fixed.
- B) Capital is variable.
- C) Capital is fixed.
- D) Labor is fixed.

Answer: C

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

7) Refer to Table 2.3. Increasing the number of workers from 2 to 3 will increase output per day by:

- A) 60 units.
- B) 90 units.
- C) 150 units.
- D) 240 units.

Answer: A

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

8) Refer to Table 2.3. The principle of diminishing returns first occurs when how many workers are hired?

- A) 2
- B) 3
- C) 4
- D) 5

Answer: C

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

Acres of Land	Tanks of Fertilizer	Truckloads of Potatoes
20	0	28
20	1	70
20	2	105
20	3	135
20	4	152
20	5	141

Table 2.4

9) Refer to Table 2.4. What can be observed about the given resources?

- A) Land is variable but fertilizer is fixed.
- B) Land and fertilizer are both fixed.
- C) Land and fertilizer are both variable.
- D) Land is fixed but fertilizer is variable.

Answer: D

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

10) Refer to Table 2.4. Increasing the tanks of fertilizer from 3 to 4 will increase the truckloads of potatoes by:

- A) 152.
- B) 35.
- C) 17.
- D) 11.

Answer: C

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

11) Refer to Table 2.4. Increasing the tanks of fertilizer from 4 to 5 will:

- A) increase truckloads of potatoes.
- B) decrease truckloads of potatoes.
- C) have no effect on truckloads of potatoes.
- D) require more acres of land.

Answer: B

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

12) Refer to Table 2.4. The principle of diminishing returns sets in with the addition of the _____ tank of fertilizer.

- A) second
- B) third
- C) fourth
- D) fifth

Answer: A

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

- 13) Diminishing returns occurs because:
- A) not enough people have jobs.
 - B) one of the inputs in the production process is fixed.
 - C) consumers don't buy enough of the products produced.
 - D) two people have not satisfied their self-interests.

Answer: B

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

Recall the Application about the use of fertilizer and its impact on crop yields to answer the following question(s). The table is taken from this Application.

Fertilizer and Corn Yield

Bags of Fertilizer	Bushels of Corn
0	85
1	120
2	135
3	144
4	147

- 14) Based on the data in the table, this Application addresses the economic concept of:
- A) the marginal principle.
 - B) the principle of voluntary exchange.
 - C) the principle of diminishing returns.
 - D) the real-nominal principle.

Answer: C

Diff: 1

Topic: Application 4, Fertilizer and Crop Yields

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

15) Refer to the table above. After applying the second bag of fertilizer, the farmer experienced:

- A) increasing returns.
- B) diminishing returns.
- C) constant returns.
- D) negative returns.

Answer: B

Diff: 1

Topic: Application 4, Fertilizer and Crop Yields

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

16) Refer to the table above. The farmer increased his total production of corn by 9 bushels per acre after applying:

- A) the first bag of fertilizer.
- B) the second bag of fertilizer.
- C) the third bag of fertilizer.
- D) the fourth bag of fertilizer.

Answer: C

Diff: 2

Topic: Application 4, Fertilizer and Crop Yields

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

17) Refer to the table above. The farmer began to experience diminishing returns after applying how many bags of fertilizer?

- A) 1
- B) 2
- C) 3
- D) 4

Answer: A

Diff: 2

Topic: Application 4, Fertilizer and Crop Yields

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

18) According to the principle of diminishing returns, an additional worker decreases total output.

Answer: FALSE

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

19) Explain the concept of diminishing returns.

Answer: The principle of diminishing returns shows that in the short run, beyond some point, output will increase at a decreasing rate. For example, producing more output in an existing production facility by increasing the number of workers sharing the facility will bring into effect the principle of diminishing returns, as output will eventually increase but at a decreasing rate.

Diff: 1

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

20) You are running a small yard maintenance business for the summer. What do you expect to happen to the number of yards you can maintain in a day as you add workers if you don't purchase more capital equipment (like mowers and leaf blowers)?

Answer: It is likely that as you add workers, you will get incrementally less output out of each additional worker. Holding constant your materials, such as trucks, lawnmowers, etc., you'll almost surely be able to maintain more yards per day. But as you hire more workers, there might be waits for use of the tools, or for transportation to the next job. This is the prediction of the principle of diminishing returns.

Diff: 2

Topic: The Principle of Diminishing Returns

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Micro-1: Identify the basic principles of economics and explain how to think like an economist

2.5 The Real-Nominal Principle

1) The real-nominal principle states that:

- A) people respond more to explicit, or real, costs than to implicit costs.
- B) people respond more to implicit costs than to explicit costs.
- C) what matters to people is the face value of money or income.
- D) what matters to people is the purchasing power of money or income.

Answer: D

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

2) The principle that states that what matters to people is the real value or purchasing power of money is the:

- A) marginal principle.
- B) principle of diminishing returns.
- C) spillover principle.
- D) real-nominal principle.

Answer: D

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

3) The face value of money or income is called its _____ value.

- A) real
- B) marginal
- C) nominal
- D) external

Answer: C

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

4) The value of money or income in terms of the quantity of goods the money can buy is called its:

- A) real value.
- B) marginal value.
- C) nominal value.
- D) implicit value.

Answer: A

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

5) The real value of money:

- A) is another word for the face value.
- B) reflects the purchasing power of money.
- C) matters less to people than its nominal value.
- D) is the same as its nominal value.

Answer: B

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

6) If real salaries increase but nominal salaries do not, this means that:

- A) the purchasing power of money has decreased.
- B) prices have not changed.
- C) prices have risen.
- D) prices have fallen.

Answer: D

Diff: 2

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

7) If real salaries decrease but nominal salaries do not, this means that:

- A) the purchasing power of money has increased.
- B) prices have not changed.
- C) prices have risen.
- D) prices have fallen.

Answer: C

Diff: 2

Topic: The Real-Nominal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

8) A Major League Baseball player signs a contract that pays \$27 million over 5 years. The \$27 million is the contract's _____ value.

- A) real
- B) implicit
- C) external
- D) nominal

Answer: D

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

9) Suppose your bank pays you 4 percent interest per year on your savings account, so that \$1,000 grows to \$1,040 over a one-year period. If prices increase by 1 percent per year over that time, approximately how much real value do you gain by keeping \$1000 in the bank for a year?

- A) \$0
- B) \$10
- C) \$30
- D) \$50

Answer: C

Diff: 2

Topic: The Real-Nominal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

10) Suppose your bank pays you 5 percent interest per year on your savings account. If prices increase by 5 percent per year over that time, approximately how much real value do you gain by keeping \$100 in the bank for a year?

- A) \$0
- B) \$1
- C) \$3
- D) \$6

Answer: A

Diff: 2

Topic: The Real-Nominal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

11) Suppose that you lend \$1,000 to a friend and he or she pays you back one year later. What is the opportunity cost of lending the money?

- A) There is no cost.
- B) the real interest rate that would have been earned on the money
- C) the nominal interest rate that would have been earned on the money
- D) the implicit cost of the money

Answer: B

Diff: 3

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

12) You borrow money to buy a house in 2009 at a fixed interest rate of 5.5 percent. By 2012, the inflation rate has steadily fallen to 1.5 percent from the recent high of 3.0 percent in 2009. Considering **only** your mortgage, is inflation good news or bad news for you?

- A) bad news, because inflation hurts everyone
- B) bad news, because it makes the real value of your mortgage payments increase
- C) good news, because it makes the real value of your mortgage payments decrease
- D) bad news, because it makes the nominal value of your mortgage payments increase

Answer: B

Diff: 2

Topic: The Real-Nominal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

- 13) What is the nominal value of money?
A) what can be purchased with the money
B) discounts taken by multiple purchases
C) savings by shopping on specific days of the week
D) its actual face value

Answer: D

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

- 14) What is the real value of money?
A) its face value
B) its compounded earnings in banks
C) the quantity of goods it can buy
D) the ability of shop at market prices

Answer: C

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

	1974	2015
Minimum wage per hour	\$ 2.00	\$ 7.25
Weekly income from minimum wage	\$80.00	\$290.00
Cost of a standard basket of goods	\$47.00	\$236
Number of baskets per week	1.70	1.23

Table 2.5

15) Use Table 2.5 above to answer the question. Comparing the minimum wages between 1974 and 2015 addresses the economic concept of:

- A) the marginal principle.
- B) the principle of voluntary exchange.
- C) the principle of diminishing returns.
- D) the real-nominal principle.

Answer: D

Diff: 1

Topic: The Value of the Minimum Wage

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

16) Use Table 2.5 above to answer the question. The nominal value of the minimum wage in 2015 was:

- A) \$2.00 per hour.
- B) \$3.63 per hour.
- C) \$5.62 per hour.
- D) \$7.25 per hour.

Answer: D

Diff: 1

Topic: The Value of the Minimum Wage

Skill: Fact

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

17) Use Table 2.5 above to answer the question. What happened to the real value of the minimum wage between 1974 and 2015?

- A) It remained the same.
- B) It increased.
- C) It decreased.
- D) It could not be determined from the given information.

Answer: C

Diff: 2

Topic: The Value of the Minimum Wage

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

18) Use Table 2.5 above to answer the question. By what percentage did the federal minimum wage increase between 1974 to 2015?

- A) 72.41 percent
- B) 262.5 percent
- C) 362.5 percent
- D) 525.0 percent

Answer: B

Diff: 2

Topic: The Value of the Minimum Wage

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

19) Use Table 2.5 above to answer the question. By what percentage did the real value of the federal minimum wage change between 1974 to 2015?

- A) -38.5%
- B) 38.5%
- C) 262.5%
- D) -262.5%

Answer: A

Diff: 2

Topic: The Value of the Minimum Wage

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

Recall the Application about the impact inflation has on your potential future salary and the repayment of student loans to answer the following question(s).

20) In analyzing the costs involved for student loans in the face of rising prices, this Application is addressing the economic concept of:

- A) the marginal principle.
- B) the principle of voluntary exchange.
- C) the principle of diminishing returns.
- D) the real-nominal principle.

Answer: D

Diff: 1

Topic: Application 5, Repaying Student Loans

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

21) According to this Application, more years of work would be required to pay off a student loan if all prices (including your salary):

- A) remained stable.
- B) increased by 20 percent.
- C) decreased by 10 percent.
- D) increased by 40 percent.

Answer: C

Diff: 1

Topic: Application 5, Repaying Student Loans

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

22) According to this Application, if you earn a salary of \$80,000 in the first year and all prices (including your salary) decrease by half in the next 5 years, what will your nominal annual salary be in 5 years?

- A) \$8,000
- B) \$10,000
- C) \$20,000
- D) \$40,000

Answer: D

Diff: 2

Topic: Application 5, Repaying Student Loans

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

23) According to this Application, if you earn a salary of \$40,000 in the first year and all prices (including your salary) triple in the next 10 years, what will your nominal annual salary be in 10 years?

- A) \$20,000
- B) \$60,000
- C) \$120,000
- D) \$180,000

Answer: C

Diff: 2

Topic: Application 5, Repaying Student Loans

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

24) According to this Application, if you earn a salary of \$40,000 in the first year and all prices triple in the next year. How will this affect the time it takes to pay off your school loans, assuming that you put all your earnings into paying it off? Assume that your debt is \$40,000.

- A) It will cut the payoff time to 1/3 of the original time.
- B) It will cut the payoff time to 1/2 of the original time.
- C) It will cut the payoff time to 2/3 of the original time.
- D) It will triple your payoff time.

Answer: A

Diff: 2

Topic: Application 5, Repaying Student Loans

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

25) According to this Application, if you earn a salary of \$40,000 in the first year and all prices are cut in half in the next year. How will this affect the time it takes to pay off your school loans, assuming that you put all your earnings into paying it off? Assume that your debt is \$40,000.

- A) It will cut the payoff time to 1/3 of the original time.
- B) It will cut the payoff time to 1/2 of the original time.
- C) It will cut the payoff time to 2/3 of the original time.
- D) It will double your payoff time.

Answer: B

Diff: 2

Topic: Application 5, Repaying Student Loans

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

26) If product prices increase slower than nominal wages increase, then the real value of wages decreases.

Answer: FALSE

Diff: 2

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

27) If product prices decrease more than nominal wages decrease, then the real value of wages will increase.

Answer: TRUE

Diff: 2

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

28) What matters to people is the face value of money or income.

Answer: FALSE

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

29) What matters to people is the real value of money or income.

Answer: TRUE

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

30) The government uses the buying power of wages rather than face value or nominal value in reporting changes in "real wages" in the economy.

Answer: TRUE

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

31) The government uses the buying power of wages in reporting changes in "nominal wages" in the economy.

Answer: FALSE

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

32) Is it possible for nominal wages to decrease while real wages increase?

Answer: Yes, though unlikely. This would imply that prices have fallen, and that the decrease is sufficiently negative to offset any losses in nominal wages.

Diff: 2

Topic: The Real-Nominal Principle

Skill: Analytical

AACSB: Analytical Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

33) Explain the real-nominal principle.

Answer: The real-nominal principle explains that what matters to people is the real value of money or income, its purchasing power and not the face value of money or income.

Diff: 1

Topic: The Real-Nominal Principle

Skill: Definition

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

34) How would an increase in prices in retail stores change the real value of the money you earn as wages?

Answer: The real value would decrease.

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

35) If your salary increases at a slower rate than prices are increasing, what would happen to your buying power?

Answer: Your money would have less buying power.

Diff: 1

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation

36) Explain why an increase in a person in debt who experiences a wage increase that is exactly equal to the inflation rate may make him or her better off.

Answer: If prices and wages increase at the same rate, a person may end up being able to afford exactly what they could buy before the price increase. However, a person in debt will see their nominal wages increase but have their debt (measured also in nominal terms) not change. This will make it easier for the debtor to pay their debts off when they experience inflation.

Diff: 2

Topic: The Real-Nominal Principle

Skill: Conceptual

AACSB: Reflective Thinking

Learning Outcome: Macro-13: Discuss the key measures, theories, and effects of inflation and deflation