

Practice Questions Units 1.4, 1.5 and 1.6

1.

Levels of Cleanup	Total Cost of Cleanup (\$)	Total Benefit of Cleanup (\$)
0	0	0
1	7	45
2	37	80
3	92	105
4	172	125
5	272	140

The table above shows the total cost and the total benefit of cleaning up pollution in a community.

Which of the following cleanup levels is socially optimal?

- (A) 1
- (B) 2
- (C) 3
- (D) 4
- (E) 5

2. Assume the following utility schedule for Aaliyah's ice cream consumption.

<u>Quantity Consumed</u>	<u>Marginal Utility</u>
1	8
2	6
3	4
4	2
5	0
6	-2

If she consumes 6 units, what is the value of her total utility from consuming ice cream?

- (A) 22
- (B) 20
- (C) 18
- (D) 0
- (E) -2

3. Cindy and Martin both sew t-shirts in a small factory. Using the same resources, Martin can sew twelve t-shirts and Cindy can sew nine t-shirts in one day. Which of the following can be concluded from the given information?

- (A) Martin has a higher opportunity cost of sewing t-shirts than Cindy does.
- (B) Cindy has a comparative advantage in sewing t-shirts.
- (C) Martin has a comparative advantage in sewing t-shirts.
- (D) Martin has an absolute advantage in sewing t-shirts.
- (E) Cindy has an absolute advantage in sewing t-shirts.

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4. Nation Alpha can produce either 3 units of good X or 1 unit of good Y with one hour of labor, whereas nation Beta can produce either 4 units of good X or 2 units of good Y with one hour of labor. Assuming that labor is the only input, which of the following is true?
- (A) Beta has an absolute advantage in the production of good X.
(B) Alpha has an absolute advantage in the production of good Y.
(C) Beta has a comparative advantage in the production of good X.
(D) Alpha has a comparative advantage in the production of good Y.
(E) Alpha has both an absolute and comparative advantage in the production of good Y.
5. The additional satisfaction received from consuming an additional unit of a good is called the
- (A) marginal utility
(B) marginal product
(C) average product
(D) average utility
(E) total utility
6. Both Amy and Brad produce and consume apple pie and ice cream. In one hour, Brad makes five apple pies or ten gallons of ice cream while Amy makes fifteen apple pies or fifteen gallons of ice cream.
- Based on the information, one can correctly conclude that
- (A) Brad has an absolute advantage in making ice cream and will sell ice cream to Amy
(B) Brad has a comparative advantage in making ice cream and will sell ice cream to Amy
(C) Brad does not have a comparative advantage in making either good and will not trade with Amy
(D) Brad has an absolute advantage in making apple pies but a comparative advantage in making ice cream
(E) Brad's opportunity cost of making ice cream is higher than Amy's

7.

	Apples	Bananas
Marginal utility of last unit	15	12
Price per unit	\$5	\$3

- The table provided shows Ricardo's marginal utility of the last unit consumed of apples and bananas and the price of each good. Ricardo has \$125 to spend on apples and bananas. He currently buys 10 apples and 25 bananas. Assuming that he remains within his budget constraint, Ricardo should do which of the following to increase his utility?
- (A) Buy more of both goods
(B) Buy fewer of both goods
(C) Buy more bananas and fewer apples
(D) Buy more apples and fewer bananas
(E) Continue buying the same quantities of both goods
8. If Aurora maximizes her total utility by spending her entire budget to purchase apples and oranges, which of the following best explains her decision making?
- (A) The amount spent on apples is equal to the amount spent on oranges.
(B) The total utility received from consuming apples is equal to the total utility received from consuming oranges.
(C) The marginal utility received from consuming the last apple is equal to the marginal utility received from consuming the last orange.
(D) The marginal utility of the last dollar spent on apples is equal to the marginal utility of the last dollar spent on oranges.
(E) The marginal utility received from consuming the last apple and that received from consuming the last orange are both maximized.

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9. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.

The table below shows the total cost and total benefit of advertisements placed by AZY Foods, a firm in the retail food market.

Number of Advertisements	Total Cost (\$)	Total Benefit (\$)
1	300	1,200
2	500	2,200
3	800	3,000
4	1,300	3,600
5	2,100	4,000
6	3,000	4,200
7	4,100	4,200

- (a) Calculate the total net benefit of placing three advertisements. Show your work.
- (b) Calculate the marginal net benefit of the third advertisement. Show your work.
- (c) What is the optimal number of advertisements placed by AZY Foods? Explain using marginal analysis.
- (d) Suppose over the next year the marginal benefit that AZY Foods receives from each advertisement increases by \$300. Identify the optimal number of advertisements.
- (e) There are many firms in the retail food market. Each firm places its own firm-specific advertisements without considering the actions of its competitors. In what market structure is AZY Foods operating?

Respond to all parts of the question:

10.

	Brazil	Spain
Corn	2 hours of labor	4 hours of labor
Shoes	8 hours of labor	12 hours of labor

The table above shows the amount of labor required to produce a unit of corn and a unit of shoes in Brazil and Spain. If both countries have equal numbers of workers, what pattern of international trade between Brazil and Spain is most likely to emerge?

- (A) Brazil will export both corn and shoes.
- (B) Spain will export both corn and shoes.
- (C) No mutually beneficial trade can occur.
- (D) Brazil will export corn and import shoes.
- (E) Brazil will import corn and export shoes.
11. Which of the following is true if consuming one unit of a good yields 100 utils and consuming the second unit of the good increases satisfaction by 20 utils?
- (A) The marginal utility of the first unit is 20.
- (B) The marginal utility of the second unit is 80.
- (C) The marginal utility of the second unit is 120.
- (D) The total utility of consuming two units is 120.
- (E) The total utility of consuming one unit is greater than the total utility of consuming two units.

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12. A city is considering building playgrounds in city parks located near residential areas. The city planner presented to the township the following cost and benefit estimates to help the city council decide how many playgrounds to build.

Number of Playgrounds	Total Cost (\$)	Total Benefit (\$)
1	20,000	30,000
2	50,000	70,000
3	80,000	105,000
4	110,000	140,000
5	160,000	150,000
6	170,000	165,000

What is the optimal number of playgrounds to maximize net benefits?

- (A) 6
(B) 5
(C) 4
(D) 3
(E) 2
13. Carlos has a van with 20 seats and charges 10 per person per ride to the airport from downtown. Carlos' cost of the trip is 140 for any number of passengers. On one trip, Carlos has 19 seats filled when a person offers him \$5 for the last seat. Should Carlos accept the offer?
- (A) No, since the 5 fare offered is below his average cost of 7.
(B) No, since the average variable cost is greater than \$5.
(C) No, since it is illegal to charge different prices for the same service.
(D) Yes, since the marginal benefit exceeds the marginal cost.
(E) Yes, since his total revenue exceeds his total cost by \$5.
14. The table shows the number of labor hours it takes Alpha and Beta to produce a smartphone or a cake with the same resources.

	Smartphone	Cake
Alpha	5 hours	2 hours
Beta	2 hours	1 hour

If tasks are assigned according to comparative advantage, which of the following is true?

- (A) Alpha will produce both goods.
(B) Beta will produce both goods.
(C) Alpha will produce smartphones and Beta will produce cakes.
(D) Alpha will produce cakes and Beta will produce smartphones.
(E) Alpha has an absolute advantage in producing both goods.

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15. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.

Two countries, Marland and Teckana, can produce either clothing or food using all their available resources at constant opportunity cost. The table below shows the daily production of clothing or food in Marland and Teckana.

	Clothing	Food
Marland	120	20
Teckana	80	20

- (a) Which country has the absolute advantage in producing food? Explain.
- (b) Which country has the comparative advantage in producing food? Explain using numbers.
- (c) Assume the two countries specialize based on their comparative advantage. If the two countries engage in trade and one unit of food is exchanged for 5 units of clothing, will these terms of trade be mutually beneficial? Explain.
- (d) Suppose Teckana invented new equipment to only increase the production of clothing.
- (i) Draw a correctly labeled graph of Teckana’s initial production possibilities curve, with clothing on the horizontal axis and food on the vertical axis. Plot the numerical values above on the graph.
- (ii) Show the effect of the new equipment on Teckana’s production possibilities curve.
- Respond to all parts of the question.
16. If a good is available free of charge, an individual will consume it until
- (A) marginal utility is zero
- (B) average utility is zero
- (C) total utility is zero
- (D) marginal utility equals average utility
- (E) marginal utility equals total utility
17. Marginal analysis suggests that an individual will consume one additional unit of a good if the
- (A) sunk cost can be recovered
- (B) total benefit is less than the total cost
- (C) total benefit is greater than the total cost
- (D) additional benefit is less than the additional cost
- (E) additional benefit is greater than the additional cost
18. According to the law of diminishing marginal utility, which of the following is true?
- (A) Total satisfaction decreases as more units of a good are consumed.
- (B) The additional satisfaction received from consuming extra units of a good decreases as consumption of the good increases.
- (C) The additional satisfaction received from consuming extra units of a good decreases as consumption of the good decreases.
- (D) The additional satisfaction received from consuming extra units of a good increases as consumption of the good increases.
- (E) When marginal utility is decreasing, total utility is decreasing.

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19. Using cost-benefit analysis, a local government would decide to build a new bridge if
- (A) The additional tax paid by an individual resident is greater than the additional benefit of building the bridge for all residents.
 - (B) The toll paid by an individual resident crossing the bridge is less than the resident's benefit from crossing the bridge.
 - (C) The total costs of building the bridge are less than the total benefits from building the bridge.
 - (D) The total costs of building the bridge are greater than the total benefits from building the bridge.
 - (E) Total costs are at a minimum and total benefits are at a maximum.

20.

Hours at the Library	Total Benefit	Total Cost
1	12	10
2	20	13
3	26	18
4	31	25
5	33	33
6	35	42

The table provided shows the total benefits and costs of studying at the library. If the student is rational, the optimal number of hours to spend at the library is

- (A) 2
- (B) 3
- (C) 4
- (D) 5
- (E) 6

21.

UNITS OF MANUFACTURED GOODS AND
SERVICE GOODS PRODUCED USING
ONE HOUR OF LABOR

Country	Manufactured Goods	Service Goods
A	100 units	300 units
B	75 units	150 units

According to the information in the table above, which of the following statements is true if both countries have the same number of workers?

- (A) Country A has both an absolute and a comparative advantage in manufactured goods.
 - (B) Country A has an absolute advantage in manufactured goods but a comparative advantage in service goods.
 - (C) Country B has a comparative advantage in service goods but no absolute advantage in either good.
 - (D) Country A has an absolute advantage in service goods but a comparative advantage in manufactured goods.
 - (E) Country B has an absolute advantage in manufactured goods, but without more information, it is not possible to tell in which product it has a comparative advantage.
22. Dana and Robin produce smoothies and pizza. In one hour Dana can make 20 smoothies or 10 pizzas. In one hour Robin can make 18 smoothies or 6 pizzas. Which of the following statements is true?
- (A) Robin has an absolute advantage in making smoothies and a comparative advantage in making pizzas.
 - (B) Robin has both an absolute advantage and a comparative advantage in making pizzas.
 - (C) Dana has a comparative advantage in making both smoothies and pizzas.
 - (D) Dana has a comparative advantage in making pizzas, and Robin has a comparative advantage in making smoothies.
 - (E) Dana has a comparative advantage in making smoothies, and Robin has a comparative advantage in making pizzas.

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23. The opportunity cost of owning a business is equal to which of the following?
- I. The economic profits earned in the business
 - II. The accounting profits earned in the business
 - III. The profits that could be earned in another business using the same amount of resources
- (A) I only
(B) II only
(C) III only
(D) I and III only
(E) I, II, and III
24. Which of the following best describes how a consumer maximizes total utility from the consumption of a bundle of goods and services?
- (A) By choosing the quantity of each good such that the quantity demanded of each good is equal to the quantity supplied
(B) By choosing the quantity of each good such that the marginal utility from each good is equal to zero
(C) By choosing the quantity of each good such that the price is equal to the marginal revenue
(D) By choosing the level of output where marginal revenue is equal to marginal cost
(E) By choosing the combination of goods such that the marginal utility per dollar spent on the last unit of each good is equal
25. In a given time period, a person consumes more and more of a good or service and, as a result, enjoys each additional unit less and is willing to pay less for each additional unit. This behavior is consistent with the law of
- (A) diminishing returns
(B) diminishing marginal product
(C) diminishing marginal utility
(D) increasing costs
(E) scarce resources
26. For a rational consumer with diminishing marginal utility, the consumption of an additional unit of a good will result in which of the following?
- (A) Total utility will increase until it equals marginal utility.
(B) Total utility will increase while marginal utility will be negative.
(C) Total utility will increase while marginal utility will decrease.
(D) Total utility will decrease while marginal utility will be positive.
(E) Total utility will decrease while marginal utility will increase.
27. Which of the following statements regarding specialization and trade is true?
- (A) With specialization and trade, a country's production possibilities curve shifts out, showing an increase in productive capacity.
(B) With specialization and trade, a country will produce a combination of goods beyond its production possibilities curve.
(C) To gain from trade, countries specialize in producing goods and services in which they have an absolute advantage.
(D) With specialization and trade, a country can consume beyond its production possibilities curve.
(E) A country must have both the comparative and the absolute advantage in a product to specialize and gain from trade.

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28. Assume both Italy and Greece produce only two goods: wine and olive oil. If Italy holds a comparative advantage in the production of wine, then which of the following statements is NOT true?
- (A) Italy must hold an absolute advantage in the production of wine.
 - (B) Greece holds a comparative advantage in the production of olive oil.
 - (C) Italy's opportunity cost of producing one additional unit of wine is lower than Greece's.
 - (D) Greece's opportunity cost of producing one additional unit of olive oil is lower than Italy's.
 - (E) If trade is open between them, these countries have an incentive to trade.
29. The following chart shows the total utility that Juan receives from consuming various amounts of chocolate candy bars each day.

<u>Number of Candy Bars Consumed per Day</u>	<u>Total Utility</u>
0	0
1	40
2	70
3	90
4	100
5	80

- Which of the following statements about Juan's marginal utility is correct?
- (A) His marginal utility from the first candy bar is greater than his marginal utility from the second candy bar.
 - (B) His marginal utility from the fourth candy bar is greater than his marginal utility from the third candy bar.
 - (C) His marginal utility increases at a constant rate.
 - (D) He first experiences diminishing marginal utility with the consumption of the fifth candy bar.
 - (E) His greatest marginal utility comes from his consumption of the fourth candy bar.
30. Karen works part-time at a local convenience store and earns 10 per hour. She wants to spend next Saturday afternoon attending a music concert. The full price of a concert ticket is 75, but Karen was able to get a discounted price of \$50 from a friend who purchased the ticket but has become unable to attend. If Karen took 4 hours off from her job to attend the concert, what was her opportunity cost of attending the concert?
- (A) \$40
 - (B) \$50
 - (C) \$75
 - (D) \$90
 - (E) \$115

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31. Kerri goes shopping for volleyballs. The table below shows the dollar value of the total benefit she receives from buying various quantities of volleyballs.

Volleyballs	Total Benefit
0	\$0
1	\$50
2	\$95
3	\$125
4	\$146
5	\$156
6	\$160
7	\$161

- Calculate the marginal benefit Kerri receives from buying the third volleyball.
- Assume the price of each volleyball is \$9.
 - Calculate Kerri's total consumer surplus if she buys two volleyballs. Show your work.
 - How many volleyballs should Kerri buy to maximize her total consumer surplus from volleyballs? Explain using marginal analysis.
- Assume that the market for volleyballs is perfectly competitive and that soccer balls are a substitute for volleyballs.
 - Draw a correctly labeled graph of the market for volleyballs, and label the equilibrium price as P_1 and the equilibrium quantity as Q_1 .
 - If the price of soccer balls decreases, show the effect on the equilibrium price and quantity of volleyballs on your graph in part c(i).
- Assume instead that a 10 percent increase in income causes the demand for volleyballs to fall by 5 percent.
 - Calculate the income elasticity of demand for volleyballs.
 - Does the value of the income elasticity indicate that volleyballs are a normal good or an inferior good? Explain.

Respond to all parts of the question.

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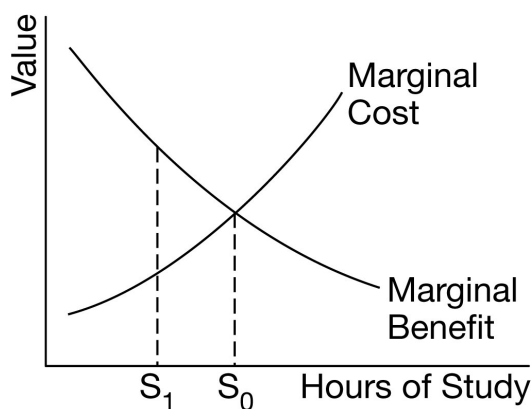
32. The table below shows the number of hours it takes for Kim to install a computer or to paint a garage and for Maria to install a computer or to paint a garage.

	<u>Kim</u>	<u>Maria</u>
Install computer	2 hours	4 hours
Paint garage	10 hours	12 hours

If tasks are assigned according to comparative advantage, which of the following is true?

- (A) Kim should perform both tasks.
 (B) Maria should perform both tasks.
 (C) Kim should install computers and Maria should paint garages.
 (D) Kim should paint garages and Maria should install computers.
 (E) Kim and Maria should both install computers.

33.



The graph above shows the marginal benefit that a student receives from additional hours of study, and the marginal cost the student will incur from additional hours of study. Which of the following is true?

- (A) Beyond S_0 hours of study, there is no further benefit from devoting additional hours to study.
 (B) At S_1 hours of study, the extra cost of study time exceeds the extra benefit of study time.
 (C) The optimal number of hours that the student should study is S_0 hours.
 (D) The rational individual should study more than S_0 hours.
 (E) The marginal cost of studying decreases as more time is spent studying.

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34.

Number of Apples	Total Utility
2	130
3	180
4	220
5	250
6	270
7	280

The marginal utility per dollar spent on the last orange consumed is 75. If the price of an apple is \$0.50, how many apples would Johnny have to consume before he considers purchasing another orange?

- (A) 2
- (B) 3
- (C) 4
- (D) 5
- (E) 6

35. The marginal benefit of consuming a good is

- (A) the change in average utility that results from consuming one more unit of the good
- (B) the same as the total benefit
- (C) equal to the marginal cost of the good
- (D) the change in total expenditures as a result of buying one more unit of the good
- (E) the maximum amount a consumer is willing to pay for one more unit of the good

36. When marginal utility from consuming a good is zero, the total utility from consuming the good is

- (A) zero
- (B) negative
- (C) maximized
- (D) rising at a constant rate
- (E) equal to marginal utility per dollar spent on the good

37.

Milkshake Cups	Total Utility (utils)
1	50
2	100
3	145
4	185
5	220

Which of the following is true based on Rosco's utility data given in the table provided?

- (A) Rosco's marginal utility from the fourth cup is 185 utils.
- (B) Rosco's marginal utility from the fifth cup is 35 utils.
- (C) Rosco's marginal utility from the third cup is greater than the marginal utility from the second cup.
- (D) Rosco's marginal utility from the fourth cup is greater than the marginal utility from the third cup.
- (E) Rosco's total utility and marginal utility both increase as he consumes more cups of milkshake.

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38. The information below shows the marginal utilities a student receives from the consumption of pizza and pens. Assume that the marginal utility of each good is independent of the quantity of the other good consumed.

Units of Pizza	Marginal Utility of Pizza	Units of Pens	Marginal Utility of Pens
1	20	1	8
2	18	2	7
3	16	3	6
4	14	4	5
5	12	5	4
6	10	6	3
7	9	7	2
8	8	8	1

If the student purchases 2 units of pizza and 2 units of pens, the student's total utility will be

- (A) 4 utils
 (B) 25 utils
 (C) 28 utils
 (D) 50 utils
 (E) 53 utils
39. Nirali is a student at the University of Ainsley. She has 5 hours to study for two exams today. The tables below show Nirali's expected scores given the amount of time she studies for each exam.

Number of Hours Spent Studying Microeconomics	Expected Score on Microeconomics Exam (100-point scale)
5	100
4	96
3	90
2	82
1	60
0	0

Number of Hours Spent Studying History	Expected Score on History Exam (100-point scale)
0	0
1	40
2	60
3	72
4	77
5	80

- Nirali spends 3 hours studying microeconomics and 2 hours studying history. Calculate her gain from the second hour spent studying history.
- Calculate Nirali's opportunity cost of the second hour spent studying history.
- Assume Nirali increases the time she allocates to studying history. What happens to the opportunity cost of studying history? Explain.
- Assume that Nirali has a goal of maximizing the sum of her test scores (the score on microeconomics plus the score on history). How many hours should she study for each exam?
- Nirali learns that her tennis practice has been canceled, freeing up an additional hour for studying. Given your answer to part (d), will Nirali allocate the additional hour to studying microeconomics or to studying history to maximize the sum of her test scores? Explain using marginal analysis.

Respond to all parts of the question.

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40. The table shows the marginal utility that Olivia derives from consuming two goods: chocolate bars and slices of pizza.

Quantity of Chocolate Bars	Marginal Utility of Chocolate Bars (in utils)	Quantity of Pizza Slices	Marginal Utility of Pizza Slices (in utils)
1	10	1	26
2	6	2	20
3	5	3	15
4	4	4	12
5	2	5	10
6	1	6	9

Olivia has a limited weekly income of 10 and spends it all on chocolate bars and slices of pizza. Assume the price of each chocolate bar is 1 and the price of each slice of pizza is \$2. What combination of chocolate bars and pizza slices will maximize Olivia's total utility given her weekly income?

- (A) 0 chocolate bars and 5 slices of pizza
 (B) 1 chocolate bar and 2 slices of pizza
 (C) 2 chocolate bars and 4 slices of pizza
 (D) 4 chocolate bars and 3 slices of pizza
 (E) 6 chocolate bars and 2 slices of pizza
41. If Nation X produces coffee at a higher opportunity cost than Nation Y, which of the following is true?
- (A) Nation X must have an absolute advantage in producing coffee.
 (B) Nation X must have a comparative advantage in producing coffee.
 (C) Nation Y must have an absolute advantage in producing coffee.
 (D) Nation Y must have a comparative advantage in producing coffee.
 (E) There is insufficient information to determine both absolute and comparative advantage.
42. Opportunity cost is defined as
- (A) excess demand for a good
 (B) unlimited resources and unlimited wants
 (C) a comparative advantage in the production of a good
 (D) the value of the next best alternative that is forgone when an activity is pursued
 (E) the value of all other possible alternatives that are forgone when an activity is pursued

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43. After graduating from high school, Maria chose to go to college, while Omar chose to work full- time. Which of the following best describes the opportunity costs for these decisions?
- (A) Maria’s opportunity cost includes the salary she could have earned if she had gone to work.
 - (B) Maria’s opportunity cost is her living expenses while attending college.
 - (C) Omar’s opportunity cost is the salary he will earn from working.
 - (D) Omar’s opportunity cost is the tuition and expenses he would have paid for college.
 - (E) Omar’s opportunity cost is definitely greater than Maria’s.
44. **Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.**

The table below shows the marginal benefit, in dollars, that Patrick derives from consuming two goods, apples and Good B.

Quantity of Apples	Marginal Benefit of Apples	Quantity of Good B	Marginal Benefit of Good B
1	\$14	1	\$36
2	\$6	2	\$28
3	\$4	3	\$20
4	\$3	4	\$12
5	\$1	5	\$2
6	\$0	6	\$0

Patrick has a limited weekly income of 30, *and he spends it all on apples and Good B. Assume the price of each apple is 2* and the price of Good B is \$4 per unit.

- (a) Calculate the total consumer surplus from Good B if Patrick consumes 2 units of Good B. Show your work.
- (b) Given his weekly income, would Patrick be able to buy 2 apples and 3 units of Good B? Explain using numbers.
- (c) Identify the quantity of apples and the quantity of Good B that will maximize Patrick’s total benefit given his weekly income. Explain using marginal analysis.
- (d) Assume Good B is produced in a perfectly competitive market and that there is a decrease in the number of consumers in the market for Good B.
 - (i) Would Patrick’s total consumer surplus from Good B if he consumes 2 units of Good B increase, decrease, or stay the same compared to your answer in part (a) ? Explain.
 - (ii) Will the quantity of Good B that will maximize Patrick’s total benefit increase, decrease, or stay the same? Explain.

Respond to all parts of the question.

45. After graduating from high school, Peggy Smith decided to enroll in a two-year program at the local community college rather than to accept a job that offered a salary of 12, 000 *per year. If the annual tuition and fees are 4,600*, the annual opportunity cost of attending the community college is
- (A) \$4,600
 - (B) \$7,400
 - (C) \$12,000
 - (D) \$16,600
 - (E) \$24,000

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46. The table below shows the total labor hours required to produce a unit of gold and the total labor hours required to produce a unit of sugar in Portugal and Spain, respectively.

	Portugal	Spain
Gold	1 hour	2 hours
Sugar	4 hours	3 hours

Which country has an absolute advantage in sugar production?

- (A) Neither Spain nor Portugal, because both require fewer labor hours to produce a unit of gold than to produce a unit of sugar.
- (B) Spain, because the opportunity cost of sugar in terms of gold is lower.
- (C) Spain, because it requires fewer total labor hours than Portugal to produce a unit of sugar.
- (D) Portugal, because it requires more total labor hours than Spain to produce a unit of sugar.
- (E) Portugal, because it takes only a quarter of an hour to produce a unit of sugar.
47. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.

Assume both Atlantis and Zanadu produce helmets and baseballs. Using equal amounts of resources, Atlantis can produce 100 helmets or 200 baseballs, whereas Zanadu can produce 100 helmets or 400 baseballs.

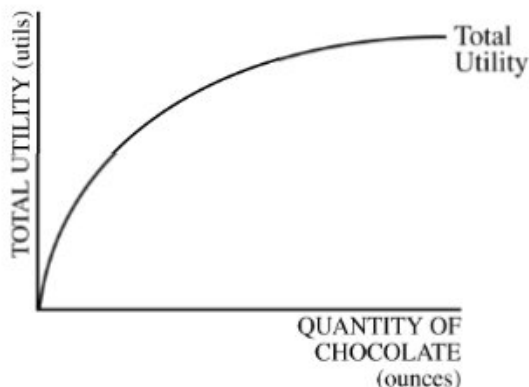
- (a) Assume both Atlantis and Zanadu experience constant opportunity costs in producing helmets and baseballs. Draw a correctly labeled graph illustrating the production possibilities curves (PPCs) for Atlantis and Zanadu, showing helmets on the horizontal axis and baseballs on the vertical axis. Plot the numerical values provided above on your graph.
- (b) Calculate the opportunity cost of one helmet for Atlantis. Show your work.
- (c) Which country has an absolute advantage in the production of baseballs?
- (d) Which country has a comparative advantage in the production of baseballs? Explain.
- (e) If Atlantis and Zanadu specialize based on comparative advantage and trade, would they be able to gain from trade if the terms of trade are 1 helmet for 3 baseballs? Explain.

Respond to all parts of the question.

48. Cost-benefit analysis assumes rational agents do which of the following?
- (A) Always make a decision that is best for society
- (B) Compare additional costs and additional benefits when making a decision
- (C) Consider only what they will lose when making a decision
- (D) Consider only what they will gain when making a decision
- (E) Always make the same decision

Practice Questions Units 1.4, 1.5 and 1.6

49.



The diagram above shows Sally's utility function for chocolate.

Her utility function illustrates the principle of

- (A) trade-offs when making choices
 - (B) diminishing marginal utility
 - (C) income and substitution effects
 - (D) increasing opportunity cost
 - (E) constrained utility maximization
50. Suppose that in one week Sam can knit 5 sweaters or make 4 blankets and Rob can knit 10 sweaters or make 6 blankets. Which of the following is true?
- (A) Sam has an absolute advantage in making blankets.
 - (B) Sam has an absolute advantage in knitting sweaters.
 - (C) Sam has a comparative advantage in making blankets.
 - (D) Sam has a comparative advantage in knitting sweaters.
 - (E) Sam has neither a comparative nor an absolute advantage in knitting sweaters or making blankets.
51. Sasha is a utility-maximizing consumer who spends all of her income on peanuts and bananas, both of which are normal goods.
- a. Assume that the last unit of peanuts consumed increased Sasha's total utility from 40 utils to 48 utils and that the last unit of bananas consumed increased her total utility from 52 utils to 56 utils.
 - i. If the price of a unit of peanuts is \$1 and Sasha is maximizing utility, calculate the price of a unit of bananas.
 - ii. If the price of a unit of peanuts increases and the price of a unit of bananas remains unchanged from the price you determined in part (a)(i), how will Sasha's purchase of peanuts change?
 - b. Assume that the cross-price elasticity of demand between peanuts and bananas is positive. A widespread disease has destroyed the banana crop. What will happen to the equilibrium price and quantity of peanuts in the short run? Explain.
 - c. Assume that the price of bananas increases.
 - i. Will the substitution effect increase, decrease, or have no effect on the quantity of bananas demanded?
 - ii. What happens to Sasha's real income?

Practice Questions Units 1.4, 1.5 and 1.6

52. Nation Aga can produce either 3 units of good X or 1 unit of good Y with one hour of labor, while nation Kaza can produce either 4 units of good X or 2 units of good Y with one hour of labor. Assuming that labor is the only input, mutually beneficial exchange can take place between Aga and Kaza if
- (A) Aga exchanges $\frac{1}{2}$ unit of good X for 1 unit of good Y from Kaza.
 - (B) Aga exchanges $1\frac{1}{2}$ units of good X for 1 unit of good Y from Kaza.
 - (C) Aga exchanges $2\frac{1}{2}$ units of good X for 1 unit of good Y from Kaza.
 - (D) Kaza exchanges 1 unit of good Y for 1 unit of good X from Aga.
 - (E) Kaza exchanges 2 units of good Y for 1 unit of good X from Aga.
53. Assume a worker can either cut grass or wash windows in a given day. It takes 5 hours to mow a one-acre lawn and 2.5 hours to wash all the windows in a house. When a worker chooses to wash the windows of four houses in a neighborhood, what is the opportunity cost of this decision?
- (A) The pay the worker receives for washing the windows in the four houses
 - (B) The pay the worker would receive for cutting one lawn
 - (C) Cutting the grass at the same four houses
 - (D) The pay the worker would have received from cutting the grass at two houses
 - (E) The pay the worker would receive for cutting .25 lawns

54.

Project	Total Costs(in millions)	Total Benefits(in millions)
Widening existing highways	\$100	\$80
Building new highways	\$100	\$90
Building a new bridge	\$100	\$140
Building a new tunnel	\$100	\$115
Expanding an existing airport	\$100	\$130

The table above shows the costs and benefits for new construction projects the government is considering. Based on these costs and benefits, which of the construction projects should the government undertake?

- (A) Widening existing highways
- (B) Building new highways
- (C) Building a new bridge
- (D) Building a new tunnel
- (E) Expanding an existing airport

Practice Questions Units 1.4, 1.5 and 1.6

55. The table below shows total utility in utils that a utility-maximizing consumer receives from consuming two goods: apples and oranges.

Apples		Oranges	
Quantity	Total utility	Quantity	Total utility
0	0	0	0
1	20	1	30
2	35	2	50
3	45	3	65
4	50	4	75
5	52	5	80

Assume that apples cost 1 each, oranges cost 2 each, and the consumer spends the entire income of \$7 on apples and oranges.

- Using the concept of marginal utility per dollar spent, identify the combination of apples and oranges the consumer will purchase. Explain your reasoning.
- With the prices of apples and oranges remaining constant, assume that the consumer's income increases to \$12. Identify each of the following.
 - The combination of apples and oranges the consumer will now purchase
 - The total utility the consumer will receive from consuming the combination in (i)
- With income remaining at 12, assume the price of oranges increases to 4 each. Identify each of the following.
 - The combination of apples and oranges the consumer will now purchase
 - The total utility the consumer will receive from consuming the combination in (i)

Respond to all parts of the question.

56. A country can consume beyond its present production possibilities curve when it
- trades with other countries, thus taking advantages of different opportunity costs
 - reduces unemployment, thus increasing output
 - experiences decreasing opportunity costs.
 - faces an upward-sloping production possibilities curve
 - faces a downward-sloping production possibilities curve
57. Josephine is buying candy and gum. If she is maximizing her utility for the combination of candy and gum she buys, which of the following must hold?
- Marginal utility of candy $\div$ price of candy = marginal utility of gum $\div$ price of gum
 - Total utility of candy $\div$ price of candy = total utility of gum $\div$ price of gum
 - Marginal utility of candy $\div$ total utility of candy = marginal utility of gum $\div$ total utility of gum
 - Marginal utility of candy $\times$ price of candy = marginal utility of gum $\times$ price of gum
 - Total utility of candy $\times$ price of candy = total utility of gum $\times$ price of gum

Practice Questions Units 1.4, 1.5 and 1.6

58. In the country Beta it takes two hours of labor to produce a unit of tea and four hours of labor to produce a unit of bread. In the country Zeta it takes three hours of labor to produce a unit of tea and nine hours of labor to produce a unit of bread. Which of the following is true?
- (A) Country Zeta has an absolute advantage in producing both tea and bread.
 - (B) Country Zeta has an absolute advantage and a comparative advantage in producing tea.
 - (C) Country Beta has an absolute advantage and a comparative advantage in producing tea.
 - (D) Country Beta has the lower opportunity cost in producing bread and therefore a comparative advantage in producing bread.
 - (E) Country Beta, with trade, will export both tea and bread to country Zeta.