

Please Read these instructions carefully

This exam has 41 questions. Make sure you have 41 questions, and answer all 41 questions.

The exam has four questions in it about the structure of the course. For each of these questions you answer, you will be marked correct, no matter how you answer. This gives you 4 correct answers out of 41—for free.

When answering a true/false question ignore the words “true” and “false” on the bubble sheets. That is, sometimes “true” will be bubble A and sometimes “true” will be bubble B.

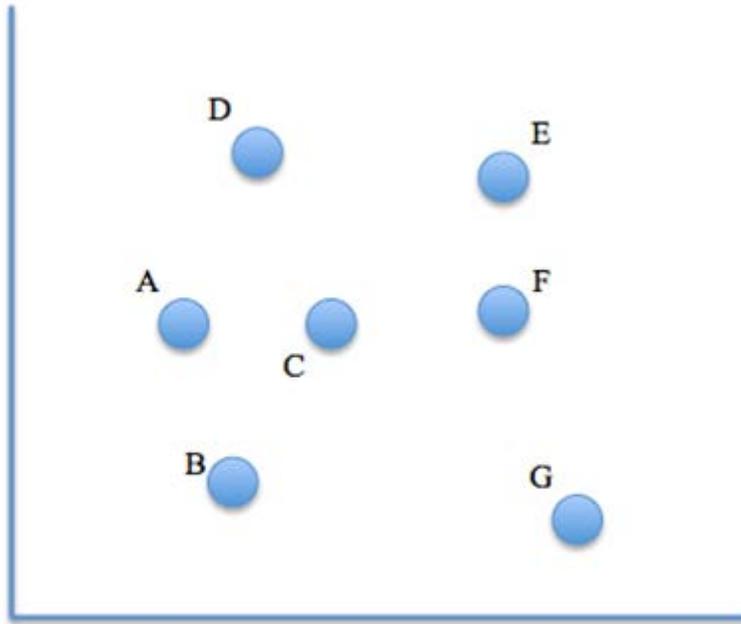
Make sure to indicate Version A on your bubble sheet.

Note that many of the questions on this exam are modifications of questions you have seen on the Aplia quizzes or on the old exams. So, if a question looks familiar it might not be identical to a previous question.

Sometimes what is said in one question might help you to answer another question.

Please read the questions carefully.

1. (Owen) Assume a world of two commodities: a bad and a good. On the graph below the bad is on the vertical axis and the good is on the horizontal axis. Each dot represents a different consumption bundles. (To be clear bundles A and C have the same amount of the bad, and bundle F has a bit more of the bad). Which bundle or bundles are necessarily preferred to bundle C?

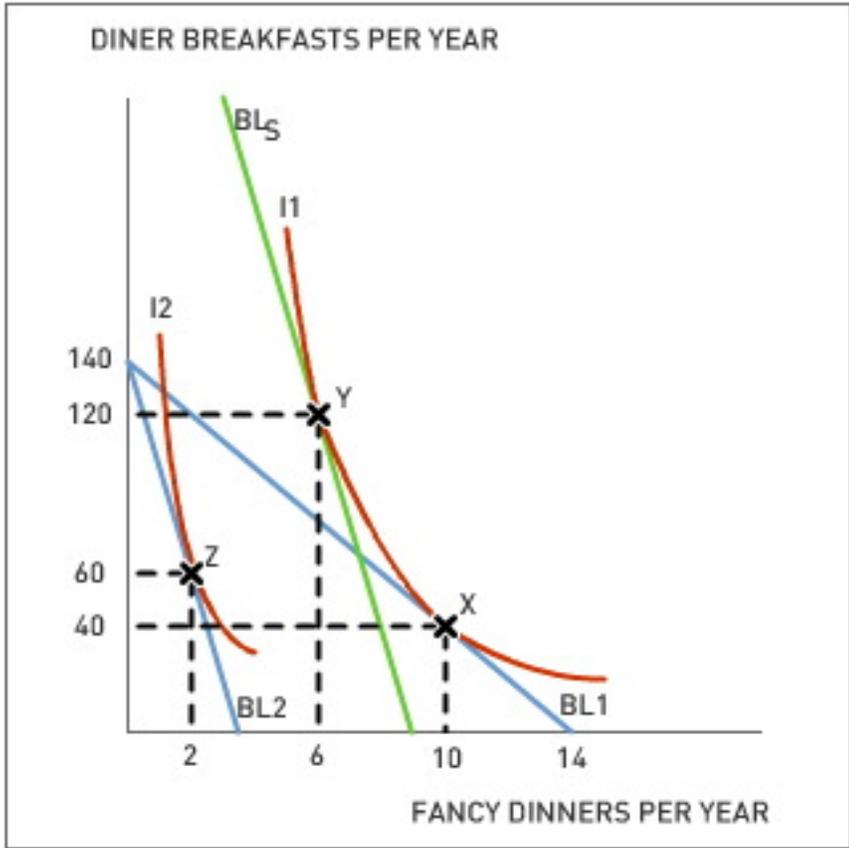


- A) bundles D, E and F
- B) bundles E, F and G
- C) bundle B
- D) bundle G

2. (variation on old question) When the price of a Lady Gaga concert ticket in Boulder is \$100 per seat, the ticket office can sell 10,000 tickets. When the price of a ticket is \$150 per seat, they can sell 6,000 tickets. Which of the following statements is true?
- A) The demand for this ticket is price inelastic, so an increase in the price of the ticket will decrease the total revenue of the ticket seller.
 - B) The demand for this ticket is price elastic, so an increase in the price of the ticket will decrease the total revenue of the ticket seller.
 - C) The demand for this ticket is elastic, so an increase in the price of the ticket will increase the total revenue of the ticket seller.
 - D) The demand for this ticket is price inelastic, so an increase in the price of the ticket will increase the total revenue of the ticket seller.
3. To produce X widgets a firm must choose an input combination that is on the isoquant for X widgets.
- A) True
 - B) False

4. (on an Aplia quiz) To maximize its profits a competitive firm will want to minimize its production costs.
- A) Yes
 - B) No
5. (Akhil) Suppose the market for high-skilled workers is currently in equilibrium. If the government enacts a binding wage ceiling in this market tomorrow, which of the following predictions is most likely to be true? (Choose the answer that is both correct and most informative)
- A) Every high-skilled worker who wants to work at the mandated wage will be working, and the firms will be hiring as many high-skilled workers as they desire at the mandated wage.
 - B) Every high-skilled worker who wants to work at the mandated wage will be working, but some firms will be frustrated, unable to hire as many workers as they would like at the mandated wage.
 - C) Some high-skilled workers who want to work at the mandated wage will not be able to, but the firms will be hiring as many high-skilled workers as they desire at the mandated wage.
 - D) Some high-skilled workers who want to work at the mandated wage will not be able to, and some firms will be frustrated, unable to hire as many workers as they would like at the mandated wage.
6. (Zach) After spending his second hour with Kurtz, Marlow's insanity increased by 20%. Between Marlow's first and second hour with Kurtz, Marlow's time-with-Kurtz elasticity of insanity is:
- A) negative and inelastic
 - B) positive and inelastic
 - C) positive and elastic
 - D) negative and elastic

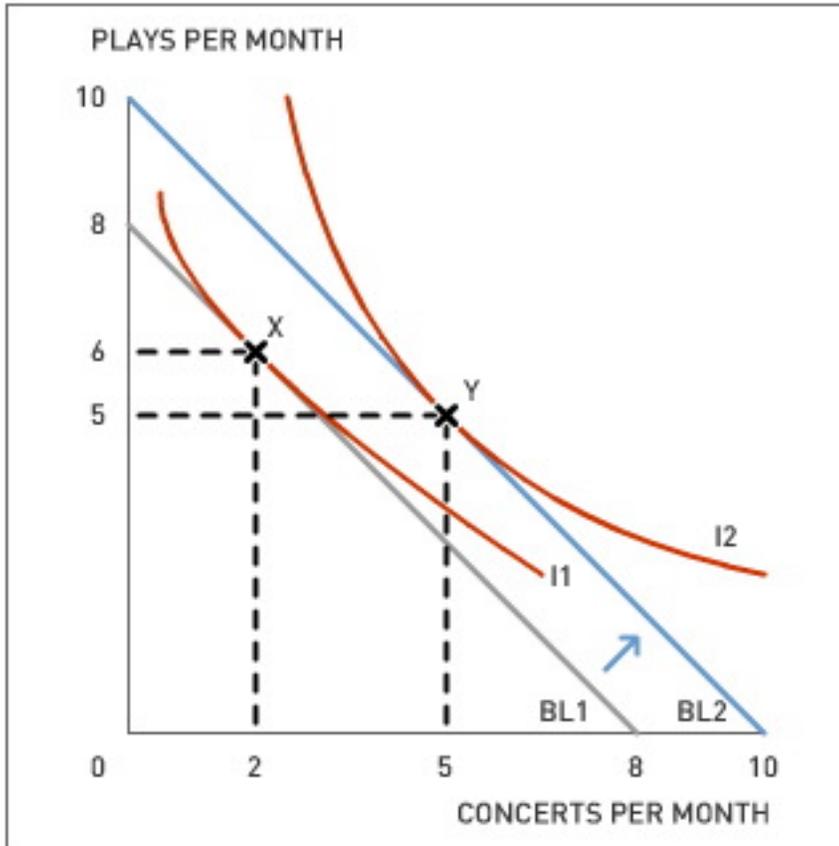
7. (Aplia quiz question) Paolo and Maria Rossi live in San Diego and enjoy going out to fancy restaurants for dinner and to diners for breakfast. On the following diagram, the curves I1 and I2 represent two of their indifference curves for fancy dinners versus diner breakfasts. Their total income to be spent on eating out is \$1,400 per year. The price of a diner breakfast is always \$10. BL1 is the budget line when dinners cost \$100, and BL2 is the budget line when dinners cost \$400. The lines BL2 and BLS are parallel, and BLS is tangent to I1 at point Y.



The substitution effect of the price increase, from \$100 to \$400 for each fancy dinner, causes the Rossis to go out to dinner _____ times per year.

- A) 8 fewer
- B) 4 fewer
- C) 12 fewer
- D) 4 more

8. (Aplia quiz question) Winona enjoys going to the theater to see plays, and she also enjoys going to rock concerts. The following diagram shows two of Winona's indifference curves for going to plays and concerts. With Winona's initial budget line, shown by BL1, she chose to go to 2 concerts and 6 plays per month (point X). Then her budget line shifted to that shown by BL2, and she chose to go to 5 concerts and 5 plays per month (point Y).



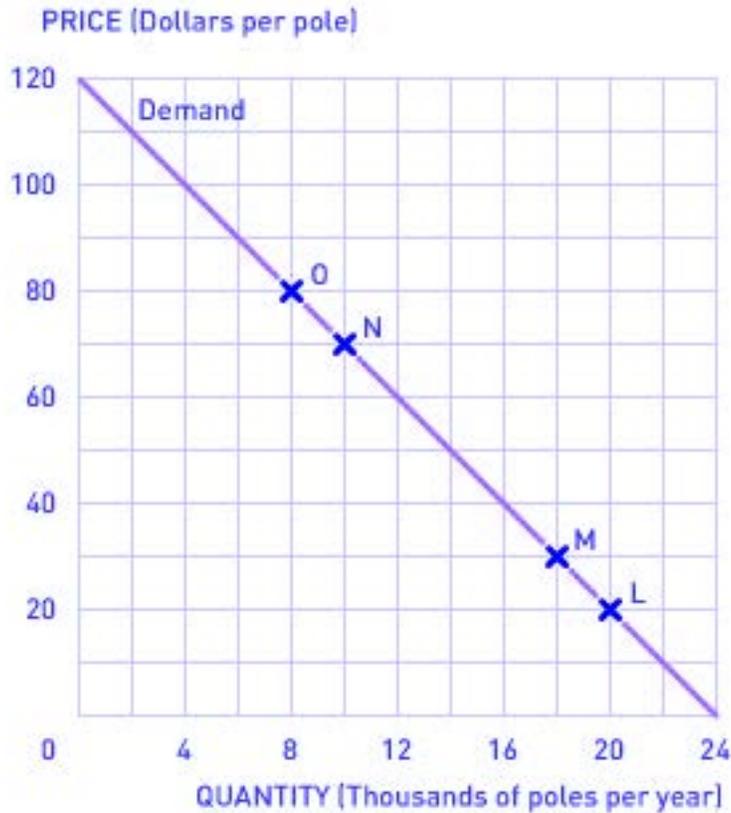
Based on Winona's consumption of plays and concerts after her budget line shifted, you know that for Winona, plays are _____ and concerts are _____.

- A) inferior goods; superior goods
- B) normal goods; inferior goods
- C) normal goods; superior goods

9. Assume a world of only two goods: food and rental housing. Also assume that Rosalyn's preferences never change. Rosalyn lives in Denver and consumes a positive amount of both goods. A recession starts and real estate prices drop, so rents fall. Food prices remain unchanged and, luckily, Rosalyn keeps her job, so her income remains the same. Which of the following statements is correct?
- A) Rosalyn will necessarily consume more food because she will have more money to spend on food because she needs to spend less on housing.
 - B) Rosalyn will necessarily consume more housing because its relative price has decreased.
 - C) Rosalyn will definitely not be worse off, but, without more information all we can say about her new consumption bundle, compared to her original bundle, is that she will not consume less of both goods. .
 - D) Rosalyn will definitely not consume more of both goods.
10. If all prices change by the same proportion (all increase or decrease by the same percent), income remaining constant, there will be an "income effect" but no "substitution effect."
- A) True
 - B) False
11. Assume a world of only two goods: hamburgers and hot dogs. At Mabel's current consumption levels, the maximum amount of hot dogs she would be willing to give up in order to obtain one more hamburger is her
- A) Marginal rate of substitution of hamburgers for hot dogs
 - B) Marginal rate of substitution of hot dogs for hamburgers
12. (Edward question on an Aplia quiz) Which statement best describes how the competitive firm chooses the input combination it will use to produce, in the long run, its chosen level of output.
- A) It is determined by the state of technical knowledge for producing its output and the constraints imposed on the firm by the input markets.
 - B) It is determined by the price it can sell its output.
 - C) It is determined by the input prices
 - D) It is determined by the isoquant map

13. (variation on old question) Fabian wants to get exactly 70% on the final. Fabian produces the exam score using two inputs: hours of study time and milligrams of a drug that helps him to concentrate. Which of the following statements is both necessarily correct and most informative
- A) His isoquant for producing the 70% score identifies all the different ways he would like to achieve a 70% score.
 - B) His isoquant for producing a 70% result is the rate at which he can substitute study hours for milligrams of drugs in the production of the 70% score
 - C) His isoquant for producing a 70% result identifies all those combinations of study hours and milligrams of drugs that will just get him a score of 70%.
 - D) His indifference curve for producing the 70% result identifies all those combinations of study hours and milligrams of drugs that will just get him a score of 70%.
14. (Zach) Cutty takes 8 hours to train an employee and 3 hours to sell a package. Avon takes 5 hours to train an employee and 2 hours to sell a package. Which of the following is true?
- A) Cutty has an absolute advantage in selling packages
 - B) Cutty has an absolute advantage in training employees
 - C) Avon has a comparative advantage in training employees
 - D) Avon has a comparative advantage in selling packages.
15. (new question from Edward) A production function is a mathematical function that identifies the maximum output associated with any combination of inputs.
- A) The statement is correct and is the definition of a production function.
 - B) This statement is incorrect.
16. (variation on old question.) Jim is a stalwart Republican; he works a steady job, has a wife and two kids, and lives in the suburbs. He hates Obamacare so much that he ranks every state-of-the-world without Obamacare over every state of the world with Obamacare. Given this, Jim would prefer that the wife and kids starve in a world without Obamacare rather than he live in a world with Obamacare and plenty to eat.
- A) No
 - B) Maybe he would, maybe he would not.
 - C) Yes

17. Consider the following demand curve for ski poles.



Suppose the price of ski poles is currently \$20 per pole. Because the price elasticity of demand between points M and L is _____, a \$10-per-pole rise in price will lead to _____ in total revenue per year.

- A) inelastic; an increase
- B) elastic; a decrease
- C) inelastic; a decrease
- D) elastic; an increase

18. (on an Aplia quiz) Can a competitive firm produce its profit-maximizing level of output, and not be maximizing its profits?

- A) Yes
- B) No

19. (Phillip) Joe is being robbed at gun point. The robber has three options: let Joe go and get arrested when Joe calls the police, kill Joe and take his money in which case the robber is not caught, or lock Joe in his basement so he cannot report the crime. The robber's choice is to kill Joe. What is the robber's opportunity cost?

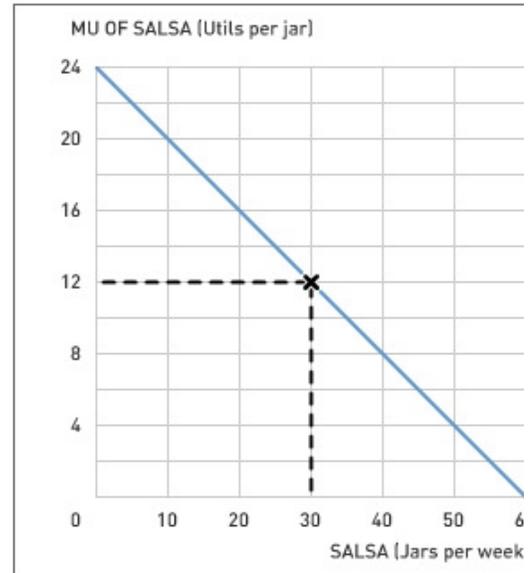
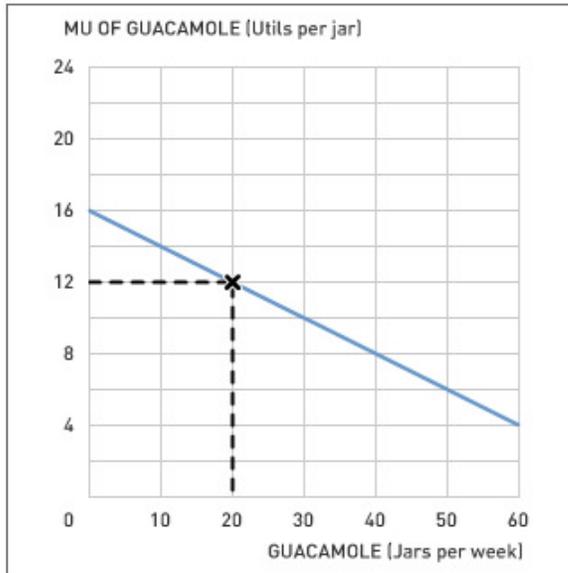
- A) Having the money and having to feed and house Joe.
- B) There is not enough information to determine the robber's opportunity cost.
- C) Arrested, no money and a free, live Joe

20. (variation on old question) All I care about is publishing research papers and going skiing; I like doing both--the more the better. CU pays me \$105 a week (my income). Skiing costs \$20 a trip, and journals charge \$15 for each paper they publish- they always accept my papers. It takes me 6 hours to do a ski trip and 4 hours to write a paper. I have 40 hours a week to allocate to writing and skiing, and can spend my whole \$105 on these two activities. Which of the following statements is both correct and most informative?
- A) I might ski 3 times and write 2 papers.
 - B) I might ski 3 times and write 3 papers.
 - C) I might ski 7 times
21. I have taken at least one calculus course. (If you answer this question it will be marked correct.)
- A) not sure
 - B) yes
 - C) no
22. (variation on old question) Suppose Alice consumes only wine and cheese. Alice's income increases, the price of wine decreases, and the price of cheese increases. Consider Alice's budget line with cheese on the vertical axis and wine on the horizontal axis. What will happen to the slope of Alice's budget line?
- A) There is not enough information to tell.
 - B) It becomes flatter.
 - C) It becomes steeper.
 - D) It necessarily remains the same.
23. (new question from Edward) Consider Fred's cost function for producing ski miles assuming the quality of his equipment is fixed and the number of cans of Red Bull he can drink is fixed at zero. Fred can choose how much time to ski. Which statement is both correct and most informative? (Fred here refers to the Fred discussed in class.)
- A) Fred's cost function identifies the minimum cost he will incur to produce m ski miles at a wage rate of w .
 - B) Fred's cost function identifies the cost he will incur to produce m ski miles at a wage rate of w .
24. (new question from Edward) Wilbur's utility function is simply a convenient way to keep track of how Wilbur ranks bundles.
- A) True
 - B) False

25. (Aplia quiz question) The state of Maine has a very active lobster industry, which harvests lobsters during the summer months. During the rest of the year, lobsters can be obtained from other parts of the world but at a much higher price. Maine is also full of "lobster shacks," roadside restaurants serving lobster dishes that are open only during the summer. Explain why it is optimal for lobster shacks to operate only during the summer.
- A) Lobster shacks are closed when minimum average variable cost lies above price.
 - B) Lobster shacks are closed when minimum average variable cost lies below price.
 - C) Lobster shacks are open when minimum average variable cost lies above price.
 - D) Fixed costs are less for shorter periods of time.
26. If currently Willy's marginal utility for candy canes is greater than his marginal utility for chocolate bars, then he should:
- A) Buy more chocolate bars and less candy canes
 - B) There is not enough information provided
 - C) Buy equal amounts of both candy canes and chocolate bars
 - D) Buy more candy canes and less chocolate bars
27. A question about previous economic courses. Which of the following best describes you? (If you answer this question it will be marked correct.)
- A) I did not take economics in H.S. but have already taken principles of macroeconomics in college.
 - B) This is my first economics course ever.
 - C) I took economics in H.S. but this is my first economics course in college
 - D) I took economics in H.S. and have already taken principles of macroeconomics in college.
28. A question about your class attendance: which of the following statements best describes you? (If you answer this question it will be marked correct.)
- A) I rarely miss a class or a recitation.
 - B) I attend class most days and attend most recitations.
 - C) I miss a lot of classes and recitations.
 - D) I rarely go to class or recitation.

29. (Libby) Consider an upward sloping aggregate supply demand and downward-sloping aggregate demand curve for Pumpkin Lattes (otherwise known as PLs). (Dollars on the vertical axis and PLs on the horizontal). Coffee shops have reintroduced this favorite autumn drink, This year the quality has improved by a touch of cinnamon. And, this year because of the drought the pumpkin ingredient is more expensive. This season, the number of PLs sold _____ and the price of PLs will _____.
- A) will increase, increase
 - B) will decrease; decrease
 - C) could increase, decrease, or stay the same; decrease
 - D) could increase, decrease, or stay the same; increase
30. (Aplia quiz question) When the marginal cost curve is below the average total cost curve, the average total cost must be _____. When the marginal cost curve is above the average total cost curve, the average total cost must be _____.
- A) constant; increasing
 - B) increasing; decreasing
 - C) decreasing; constant
 - D) decreasing; increasing
31. Libby) Horton the elephant LOVES peanuts (more are always preferred to less) and he HATES mice (fewer are always preferred to more). Horton lives in a world of two items, mice and peanuts. Given his preferences, rank the following baskets.
- Basket A= 100 peanuts and 20 mice
 Basket B= 50 peanuts and 20 mice
 Basket C= 100 peanuts and 10 mice
 Basket D=75 peanuts and 20 mice
- (The notation "X>Y" is read "X is preferred to Y", and the notation "X=Y" is read "the individual is indifferent between X and Y".)
- A) D>C=B=A
 - B) C>D<A<B
 - C) C>A>D>B
 - D) C>D>B=A

32. (Aplia question) Victor enjoys consuming both guacamole and salsa. Each jar of guacamole costs \$1, and each jar of salsa costs \$2. Currently, he buys 20 jars of guacamole and 30 jars of salsa per week. The following graphs show his marginal utility curves for guacamole (MU_G) and salsa (MU_S). You can see that at his current consumption level, Victor's marginal utility from consuming the last jar of guacamole is 12 utils per jar, and his marginal utility from consuming the last jar of salsa he bought is 12 utils per jar. He should continue to buy and consume 20 jars of guacamole and 30 jars of salsa?

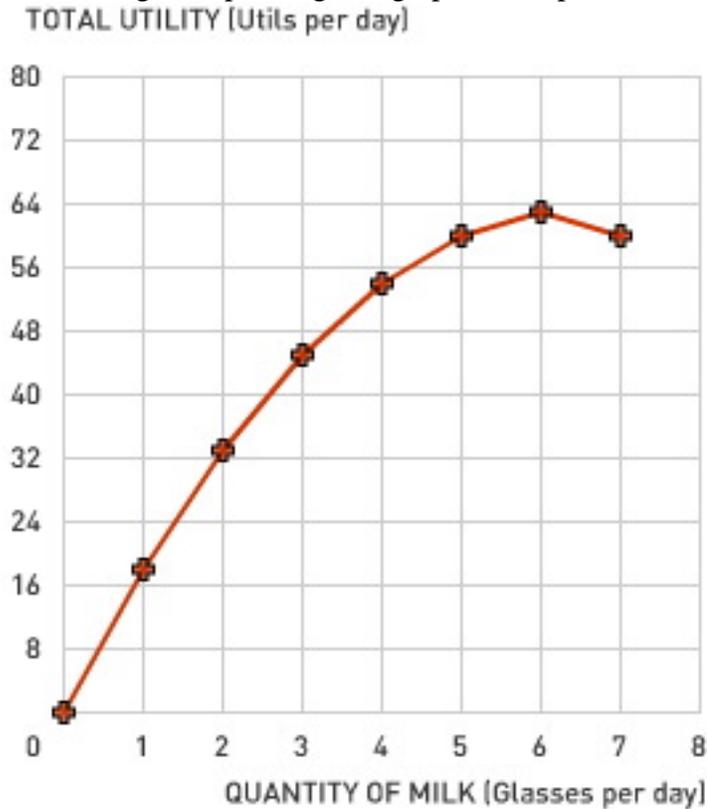


- A) Yes; the marginal utility he receives from his last jar of guacamole equals that of his last jar of salsa.
- B) No; he likes salsa and guacamole more than other goods, so he should buy more of both.
- C) No; he could buy less salsa and more guacamole, not spend any more money, and be better off.
- D) No; he could buy more salsa and less guacamole, not spend any more money, and be better off.
33. (variation on old question) The Snerd company can produce two goods, X and Y, but it only has a fixed amount of inputs at its disposal. Consider its production possibilities frontier for the production of X and Y with Y on the vertical axis. Assume the PPF is linear. Given the quantity of inputs at its disposal it could produce 50 units of good Y and 0 units of good X. And, it could alternatively produce 10 units of good X and 0 units of good Y. What can be said about producing 30 units of good Y and 5 units of good X.
- A) Given the inputs at its disposal, the Snerd company, could produce this mix, but can't produce more X unless it produces less Y.
- B) Given the inputs at its disposal, the Snerd company could produce this mix and other mixes with either more X or more Y or both.
- C) Given the inputs at its disposal, the Snerd company cannot produce this mix

34. A question about your math skills and the math in the course. Which statement best describes you. (If you answer this question, it will be marked correct.)
- A) I find the use of basic algebra helpful for understanding concepts and answering questions, but would not be pleased if, in addition, derivatives and partial derivatives were sometimes uses to explain concepts and solve problems.
 - B) I struggle with the graphs and the math. My background in math is not strong enough given the level of graphs and math presented in class.
 - C) I am comfortable with the graphs, but struggle with the equations. I would prefer the equations disappear or appear only in footnotes in the lecture notes.
 - D) I find the use of basic algebra helpful for understanding concepts and answering questions, and would be pleased if, in addition, derivatives and partial derivatives were sometimes uses to explain concepts and solve problems.
35. (Owen) The market demand for pumpkins is $Q=90-P$ and the market supply for pumpkins is $Q=P/2$. The producer surplus is _____; the consumer surplus is _____. Assume the market for pumpkins functions rationally in a perfectly competitive manner.
- A) 900; 450
 - B) 1800; 0
 - C) Not enough information
 - D) 600; 900
 - E) 600; 300
36. (variation on old question) Consider a world of two inputs vegetables and butter. The people of Vegland produce vegetables, but must buy their butter from Bovland. Meals in Vegland are vegetables with butter. Meals are the only good consumed. Their meals always consist of some butter and some vegetables. For people in Vegland their isoquants for producing meals (vegetables on the vertical axis) are negatively sloped, decreasing in slope as the amount of the butter input increases. Vegland suffers a drought which causes the price of vegetables to rise in Vegland. Elections in Vegland are coming up, and to assure their reelection, the government gives each household in Vegland some money, just enough for the household to produce the utility they got from meals before the price of vegetables increased. Given all this, choose the answer that is both correct and most informative.
- A) How meals are produced in Vegland and the number produced will be unaffected.
 - B) There is not enough information to determine how meals will be prepared in Vegland.
 - C) Meals in Vegland will be produced with more butter and less vegetables
 - D) Meals in Vegland will be produced with less butter and more vegetables

37. The isocost line in producer theory is analogous to which of the following from consumer theory?
- A) An indifference curve
 - B) An isoquant
 - C) A budget line.
 - D) None of the above
38. (modified Aplia quiz question) Expensive restaurant meals are income-elastic goods for most people, including Sanjay. Suppose his income rises by 10% this year. What can you predict about the change in Sanjay's consumption of expensive restaurant meals?
- A) Sanjay's consumption of expensive restaurant meals will rise more than 10%
 - B) Sanjay's consumption of expensive restaurant meals will rise less than 10%.
 - C) Sanjay's consumption of expensive restaurant meals will not change at all.

39. (Aplia quiz question) Ralph enjoys drinking milk, because his mother tells him it will make him grow up strong. the graph below provides information on Ralph's total utility.



For Ralph, increasing his consumption of milk results in _____ marginal utility. Whenever Ralph's marginal utility is positive, his total utility curve is _____.

- A) increasing, upward sloping
 B) decreasing; upward sloping
 C) increasing, downward sloping
 D) decreasing; downward sloping.
40. (Zach) Mary Jane lives in a world of only two commodities: joints (marijuana cigarettes) and workouts. She enjoys both and the two goods are perfect substitutes: one workout is as good as two joints. Both goods are free and the amount of time it takes to smoke a joint and workout are the same. Unfortunately, Mary Jane cannot do both at the same time. Choose the answer that is both correct and most informative.
- A) Mary will spend her life smoking joints and never workout.
 B) Mary will spend her life working out and will never smoke a joint
 C) Mary will consume joints and workouts in the ratio two joints for each workout
 D) Mary will be on the same indifference curve no matter what she does.

41. (Phillip) Picture the indifference curve for carrots, a good, and candy, originally a good but eventually a bad. If quantity of candy is placed on the horizontal axis and quantity of carrots is placed on the vertical axis which statement best describes the shape of the indifference curve?
- A) inverted U-shaped
 - B) backward C-shaped
 - C) U-shaped
 - D) C-shaped
 - E) None of the above

Answer Key

1. D
2. B
3. B
4. B
5. B
6. B
7. B
8. A
9. C
10. A
11. A
12. A
13. C
14. C
15. A
16. C
17. A
18. A
19. B
20. B
21. A, B, C
22. B
23. A
24. A
25. A
26. B
27. *(No Answer Provided)*
28. *(No Answer Provided)*
29. D
30. D
31. C
32. C
33. C
34. *(No Answer Provided)*
35. A
36. C
37. C
38. A
39. B
40. B
41. C