

Economics 101
Spring 2008
Professor Wallace

Economics 101 Midterm Exam #1

February 27, 2008

Instructions

Do not open the exam until you are instructed to begin. You will need a #2 lead pencil. If you do not have one you will need to borrow one from Professor Wallace or one of the TAs. Before you may begin the exam everyone must take the following steps.

- (1) Use the #2 lead pencil to fill in your name on the answer sheet.
- (2) Fill in your student number on the answer sheet.
- (3) Fill in your TA Code in column A of the space allotted for “Special Codes” on the answer sheet.
 - a. If your TA is Megan Ritz your TA Code is 1
 - b. If your TA is Hugette Sun your TA Code is 2.
 - c. If your TA is Hanquing Wang your TA Code is 3.
 - d. If your TA is Rui Wang your TA code is 4.
- (4) Fill in your Exam Code in column B of the space allotted for “Special Codes” on the answer sheet
 - a. If your exam is green then your Exam Code is 1.
 - b. If your exam is white then your Exam Code is 2.

The exam consists of 35 multiple-choice questions. All questions are equally weighted and there is a single best answer for each question. The exam is scheduled to end at 5:15 pm. You are encouraged to hold onto the hard copy of your exam so that you can check your answers. An answer key for this exam will be made available sometime later this evening, but the tests will not be handed back until next week. In keeping with the previously state policy, we will not except early email request for exam scores.

1. Which of the following will have the effects of shifting a country's production possibility frontier towards the origin, other things being equal?
 - a. The country experiences a mild recession
 - b. The country's population starts decreasing**
 - c. The country has discovered new oilfields
 - d. There is a breakthrough in computer technology

2. Along the production possibility frontier, trade-off exists because
 - a. Buyers will want to buy less when price goes up, but producers will want to sell more
 - b. At some levels, unemployment or inefficiency exists
 - c. The economy has only a limited quantity of resources to allocate between competing uses**
 - d. Even on the frontier itself, not all production levels are efficient

3. Suppose production possibility frontier is of bowed-shaped, bread is on the x-axis, milk is on the y-axis. Then opportunity cost of producing one more unit of bread:
 - a. Decreases as the amount of milk produced increases**
 - b. Increases as the amount of milk produced increases
 - c. Remain constant along the curve
 - d. Either of the above can happen

Using the following information to answer the next 5 questions (4-8)

Suppose there are 24,000 workers in country A and 15,000 workers in country B. In country A, 3 workers can produce one car, while 2 workers can produce one computer each day. In country B, 5 workers can produce one car, and 1 worker can produce 1 computer each day.

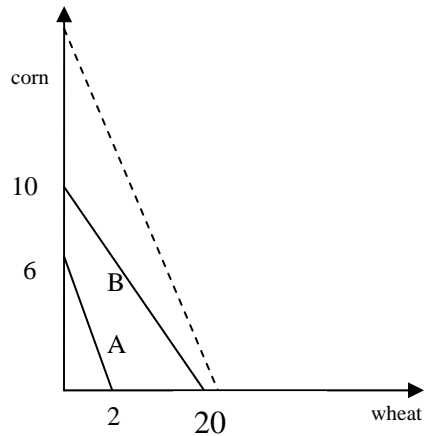
4. Which of the following statement is true:
 - a. Country A has the absolute advantage in producing both goods
 - b. Country B has the absolute advantage in producing both goods
 - c. **Country A has the absolute advantage in producing cars, while country B has the absolute advantage in producing computers.**
 - d. Country A has the absolute advantage in producing computers, while country B has the absolute advantage in producing cars

5. What is the opportunity cost of producing a computer in country A?
 - a. $\frac{1}{2}$ of a car
 - b. $\frac{1}{3}$ of a car
 - c. $\frac{3}{2}$ of a car
 - d. **$\frac{2}{3}$ of a car**

6. Which country has the comparative advantage in producing cars?
 - a. **Country A**
 - b. Country B
 - c. Neither country has the comparative advantage in producing cars
 - d. We cannot determine who has the comparative advantage from the available information

7. Suppose with free trade, one of the countries will specialize in producing cars. Which country will it be?
 - a. **Country A**
 - b. Country B
 - c. Either country may specialize in producing cars
 - d. We cannot determine who will specialize in cars from the available information

8. Suppose under free trade, country A consumes 6000 cars and 4000 computers, and country B consumes 3000 cars and 6000 computers. What are the terms of trade?
 - a. 1 car for $\frac{2}{3}$ computers
 - b. 1 car for 1 computers
 - c. **1 car for 2 computers**
 - d. 1 car for 3 computers

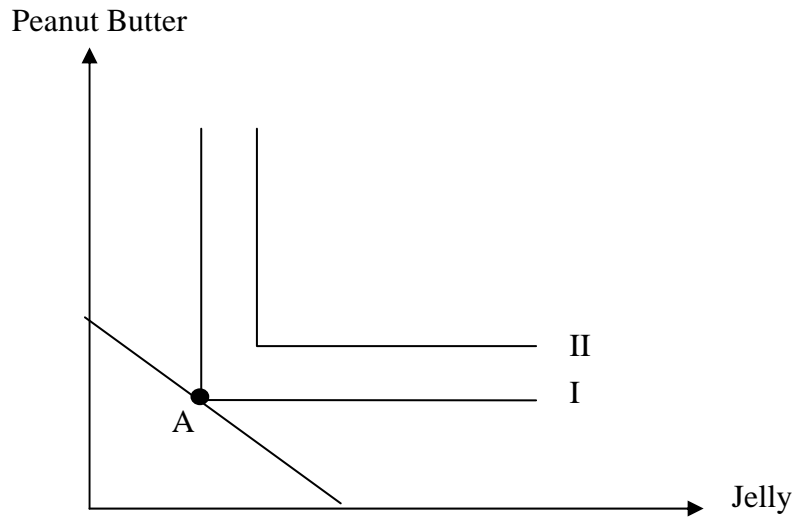


9. Country A and B's production Possibilities Frontiers are depicted as above. Country A's PPF expands parallel to the right to the dashed line. Which country should sell wheat and buy corn before and after the expansion of A's PPF (the first answer is the country that sells wheat before the expansion of A's PPF and the second answer is the country that buys corn after the expansion of A's PPF)
- A, A
 - A, B
 - B, A
 - B, B**
10. The demand and supply curves for a market are $QS = 2p - 2$, and $QD = 10 - p$. The equilibrium quantity of the good is
- 6**
 - 7.33
 - 3.33
 - 4
 - 2.67
11. A newspaper story recently reported that the price of new cars has decreased, and the quantity of new cars sold has dropped. The price and quantity changes were probably caused by:
- a decrease in buyers' incomes.**
 - an increase in buyers' incomes.
 - an increase in production costs.
 - a decrease in production costs.
 - none of the above

12. Suppose the workers' union has just negotiated higher wages for all employees in the carpet industry. The manufacturers immediately launch an advertising campaign, touting their carpet as being made by highly satisfied, highly paid workers. What is likely to happen in the market for the carpet?
- Equilibrium price and quantity of carpet traded increases.
 - Equilibrium price of carpet decreases, but quantity traded increases.
 - Equilibrium price and quantity of carpet traded decreases.
 - Equilibrium price of carpet increases, but the change in the quantity traded is ambiguous.**
 - The change in the equilibrium price of carpet is ambiguous, but the quantity traded increases.
13. Suppose pork producers switch to a cheaper pork feed. Consumers, however, think that this new pork feed may endanger their health. The end result of these changes on the market for pork will be
- a decrease in equilibrium price and quantity
 - a decrease in equilibrium price; the change in quantity is ambiguous**
 - a decrease in equilibrium quantity and an increase in price
 - a decrease in equilibrium quantity; the change in price is ambiguous
 - none of the above
14. If the price in a market is below the equilibrium price,
- there is an incentive for illegal activity.
 - some sellers have incentives to lower their prices.
 - many buyers will leave the market.
 - some buyers have incentives to offer higher prices.**
 - there is a surplus of the good.
15. The market for used cars is described by the supply and demand functions $Q_S = 2p$ and $Q_D = 10,000 - 3p$. At a price of \$3,000 for a used car, there is a
- surplus of 50,000 cars.
 - shortage of 5,000 cars.
 - shortage of 50,000 cars.
 - surplus of 5,000 cars.**
 - shortage of 10,000 cars.
16. The price elasticity of demand measures
- how often the price of a good changes.
 - the slope of a budget line.
 - how sensitive the quantity demanded is to changes in demand.
 - the responsiveness of the quantity demanded to changes in price.**

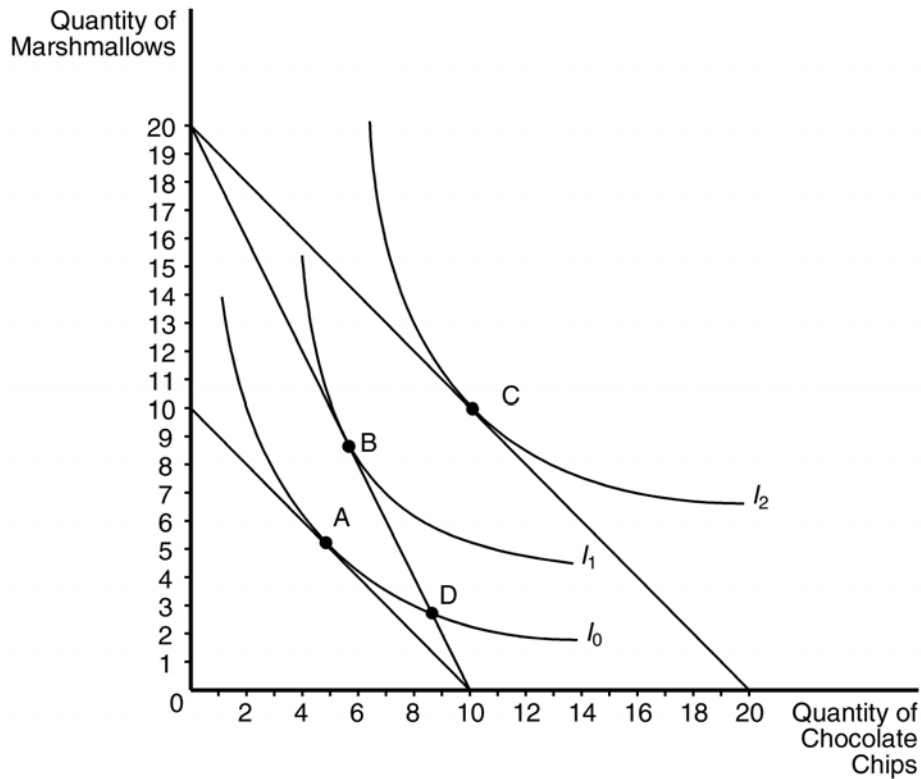
17. A local sugar company tested the effect of a price reduction for sugar. It lowered prices from \$2 to \$1 per bag and found that its revenue was twice as much as before. This implies:
- the demand for sugar is inelastic in this price range.
 - the demand curve sugar shifted to the right.
 - the supply curve of sugar shifted to the left.
 - the demand for sugar is elastic in this price range.**
 - the demand for sugar is exactly unit-elastic in this price range.
18. A fall in the price of sugar from \$10.50 to \$9.50 per pound increases the quantity demanded from 188 to 212 pounds. The price elasticity of demand (using arc elasticity) is
- 0.8
 - 1.0
 - 1.2**
 - 8.0
 - 0.2
19. The cross-price elasticity of demand between good 1 and good 2 is -0.5. Goods 1 and 2 are most likely _____.
- Substitutes.
 - Complements.**
 - Inferior goods.
 - Normal goods.
20. A 10 percent increase in the price of gasoline decreases the demand for cars by 30 percent. Thus the cross-price elasticity of demand between cars and gasoline is
- 1/3
 - 1/3
 - 3**
 - 3
21. If the price elasticity of demand for BMWs is 10, and their price changes by 10%, what do you expect will happen to demand?
- The quantity demanded will change by 100%.**
 - The quantity demanded will change by 10%.
 - The quantity demanded will not change.
 - The quantity demanded will change by 1%.
22. For which of the following pairs of goods is the cross-price elasticity of demand positive?
- Tennis balls and tennis rackets
 - Videotapes and laundry detergent
 - Airline trips and textbooks
 - Beef and chicken**

23. A tax is levied on cranberries producers. Neither supply nor demand is perfectly elastic or inelastic. Which of the following statements is FALSE?
- The price received by producers is lower than before.
 - The price paid by consumers remains the same.**
 - The price received by producers remains the same if the demand for bacon is perfectly inelastic.
 - The price that bacon producers receive remains the same if the supply of bacon is perfectly elastic.
 - The equilibrium quantity of bacon bought is not increased.
24. Suppose the demand for widgets is given by $P=12-Q$, and supply is given by $P=2$. Furthermore, suppose the government has decided to impose a tax of \$3 per widget on producers. What is the incidence of the tax on consumers?
- Consumers pay 33% of the tax in the form of higher prices.
 - Consumers pay 67% of the tax in the form of higher prices.
 - Consumers pay 80% of the tax in the form of higher prices.
 - Consumers pay 100% of the tax in the form of higher prices**
25. A consumer purchases only two goods, X and Y . To draw his budget constraint, we need to know:
- the price of good X .
 - the price of good Y .
 - his income.
 - all of the above.**
26. Jeff consumes only goods X and Y . Jeff's income is \$200 a month, the price of X is \$6, and the price of Y is \$4. The equation of Jeff's budget constraint is:
- $6Y + 4X = 200$
 - $Y = 2/3 X + 50$
 - $Y = -2/3 X + 50$
 - $6X + 4Y = 200$**



27. The above graph shows Melissa's indifference curves over peanut butter and jelly. Given her income and the initial prices, she optimally chooses to consume at point A. If the price of jelly increases, it follows that the new optimal consumption of peanut butter must
- increase.
 - decrease.**
 - stay the same.
 - Anything may happen.
 - Consumption will go to zero
28. The marginal rate of substitution is always equal to the slope of the
- demand curve.
 - budget constraint.
 - supply curve.
 - indifference curve.**

29. Peter spends all of his income on goods X and Y and is purchasing the optimal consumption bundle. If the $MU_X/MU_Y = 3$ and the price of X is equal to \$12, then the price of Y is equal to:
- \$4
 - \$6
 - \$12
 - \$3
 - \$36



30. Assume that the consumer depicted in the figure above has an income of \$100 and currently optimizes at point A. When the price of marshmallows decreases to \$5, the optimizing consumer will choose to purchase how many units of marshmallows?
- 3
 - 10
 - 9**
 - 4
 - 6

31. Liz likes to eat bagels and apples. In fact, Liz spends all of her money buying (and eating!) only bagels and apples. In addition, Liz is a rational consumer, and makes all of her decisions to maximize her own utility. Suppose that when the price of bagels is \$1 and the price of apples is \$3, Liz buys 12 bagels and no apples. However, when the price of bagels increases to \$2 (and the price of apples is still \$3), Liz is indifferent between spending money on bagels only or on apples only. Now, suppose the prices of bagels and apples both increase, to \$3 and \$4, respectively. Liz will now buy
- only bagels.
 - only apples.**
 - both bagels and apples.
 - neither bagels nor apples.
32. Jonathan spends all of his income on two goods: potatoes and carrots. His income is \$100, the price of potatoes is \$5 and the price of carrots is \$2. If the price of each good doubles and Jonathan's income doubles, which of the following statements is correct?
- Jonathan's budget line will be unaffected.**
 - Jonathan's budget line will shift out.
 - Jonathan's budget line will shift in.
 - Jonathan's budget line will be flatter.
 - Jonathan's budget line will be steeper.
33. Carl consumes only cheese and brats. Each brat costs \$2 and a block of cheese costs \$3. Carl's budget constraint is drawn with brats on the y-axis and cheese on the x-axis. At Carl's optimal consumption bundle, the slope of his indifference curve is:
- $2/3$
 - $3/2$**
 - $1/2$
 - There is not enough information to find the slope of his indifference curve.
34. Maria consumes feta and olives. Maria receives a marginal utility of 6 from the last unit of feta that she consumes. The marginal utility that Maria receives from the last unit of olives that she consumes is 4. The price of feta is \$2 and the price of olives is \$3. Maria should buy
- less feta and more olives.
 - more feta and less olives.**
 - the same amount of feta and olives.
 - There is not enough information to answer this question.

35. Camilla buys tennis balls and yogurt. The price of yogurt increases. Assuming that both tennis balls and yogurt are normal goods, the substitution effect of this price increase means that Camilla will buy ___ yogurt while the income effect of the price increase means that Camilla will buy ___ tennis balls.
- a. more, more
 - b. more, less
 - c. less, more
 - d. less, less**