

Name: _____

Student #: _____

QUEEN'S UNIVERSITY AT KINGSTON

FACULTY OF ARTS AND SCIENCE

Department of Economics

ECONOMICS 110A/111

Mid-Year/Final Examination

Econ 110A Sections 001 & 002 – Prof Ian Cromb

Econ 111 Section 001 – Prof Ugurhan Berkok

December 16, 2017

INSTRUCTIONS TO STUDENTS:

This examination is 3 HOURS in length.

There are 6 sections to this examination.

This exam is printed on both sides of the page.

Mark your selections in PENCIL on the Answer Sheet. Fill in the appropriate rectangle completely, but stay within its limits. There is only one correct answer for each question; multiple answers will be marked as incorrect. If you make changes, be sure to erase completely.

Before you begin the exam please record your **Student Number**, **Name**, and **Test Form A** in the appropriate sections of the Answer Sheet. For detailed instructions on filling in this information see the back of this page.

<p>The following aids are allowed: Casio FX-991 calculator</p>

PLEASE NOTE:

Proctors are unable to respond to queries about the interpretation of exam questions.

Do your best to answer exam questions as written.

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1. Write your Student # under “**I.D. Number**” on the Answer Sheet and fill in the appropriate rectangle below each number. See example below.
2. Print your **Last Name** followed by first name in the appropriate space, and fill in the appropriate rectangle under each letter. (If your name is too long to fit in the spaces provided, please enter as many letters as you can.) See example below.
3. Under “**Test Form**”, fill in “**A**”. See example below.

I.D. NUMBER										DO NOT MARK IN THIS AREA										TEST FORM
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LAST NAME										FIRST NAME										CODE		EXAM NUMBER									
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Part A [40 marks]

This section consists of 40 questions that survey the course material.

Answer all 40 questions; each question is worth 1 mark.

- 1) Most economies produce more than what is needed for survival, however, which of the following will still NOT occur?
- A) Economies can satisfy all wants.
 - B) Changes in agriculture production give surplus food production.
 - C) Workers can sell their labour services to firms and receive money wages in return, as opposed to selling goods they had personally produced.
 - D) Economies can satisfy an increasingly broad range of wants.
 - E) Specialization of labour and exchange of goods arise using markets.

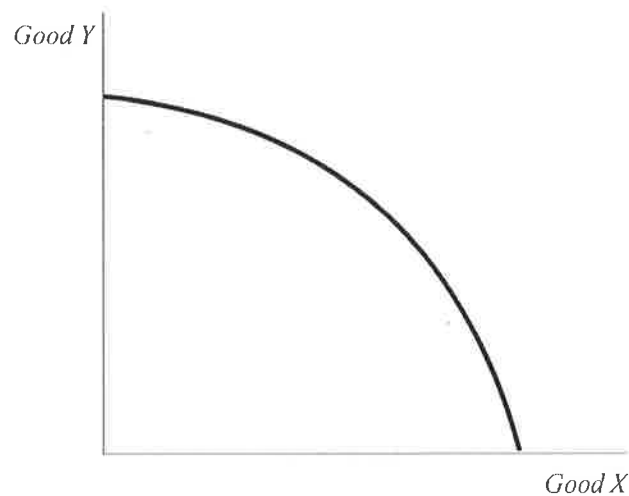


Figure 1-12

- 2) Refer to Figure 1-12. The fact that the production possibilities boundary is drawn concave to the origin reflects the
- A) decreasing opportunity cost of producing more of a good.
 - B) increasing opportunity cost of producing more of a good.
 - C) constant opportunity cost of producing more of a good.
 - D) distribution of output in an economy.
 - E) scarcity of resources in an economy.
- 3) One of the "real" flows in the circular flow of income is
- A) goods going from producers to consumers.
 - B) factor services going from producers to consumers.
 - C) goods going from consumers to producers.
 - D) money payments going from consumers to producers.
 - E) money payments going from producers to consumers.

- 4) Which of the following is a normative statement?
- A) The higher is the level of taxes, the lower is consumption spending.
 - B) The higher is the level of taxes, the higher are wage demands.
 - C) A reduction in export taxes on petroleum would result in higher wages.
 - D) Tuition fees should be waived for low-income students.
 - E) A free-trade agreement between two countries will result in an increase in trade.
- 5) Choose the statement that best describes how endogenous variables differ from exogenous variables.
- A) An endogenous variable is explained within the theory, while an exogenous variable influences the endogenous variables but is determined outside the theory.
 - B) An endogenous variable is a flow, while an exogenous variable is a stock.
 - C) An endogenous variable is explained outside the theory and influences an exogenous variable in a way determined by the theory.
 - D) An exogenous variable is a function of the endogenous variable, and both are flow variables.
 - E) An endogenous variable is a function of the exogenous variable, and both are stock variables.
- 6) One region is said to have an absolute advantage over another region in the production of good X when
- A) the first region has a more productive labour force than the second.
 - B) the first region has a larger supply of the raw materials required to produce good X.
 - C) an equal quantity of resources can produce more of good X in the first region than in the second region.
 - D) there is no demand for good X in the second region.
 - E) the opportunity cost of one unit of X is lower in the first region than in the second region.

The following table shows the quantities of wheat and rice that can be produced in Canada and India with one unit of equivalent resources.

	Wheat (bushels)	Rice (bushels)
Canada	13	5
India	6	13

TABLE 33-2

- 7) Refer to Table 33-2. To achieve the potential gains from international trade,
- A) India should export wheat to Canada and import Canadian rice.
 - B) Canada should produce both wheat and rice and not trade with India.
 - C) India should export rice to Canada and import Canadian wheat.
 - D) India should exclude wheat from its consumption.
 - E) India should produce both wheat and rice and not trade with Canada.

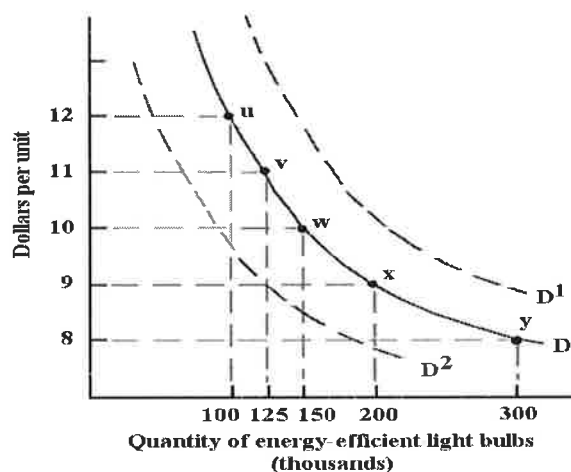


FIGURE 3-1

- 8) Refer to Figure 3-1. A shift of the demand curve for energy-efficient light bulbs from D to D¹ could be caused by
- A) an increase in the price of ordinary light bulbs.
 - B) a change in preferences away from ordinary bulbs to energy-efficient bulbs.
 - C) an expectation that government regulation will require the use only of energy-efficient light bulbs.
 - D) a decrease in the price of energy-efficient light bulbs.
 - E) a news bulletin stating that energy-efficient light bulbs emit a harmful gas.

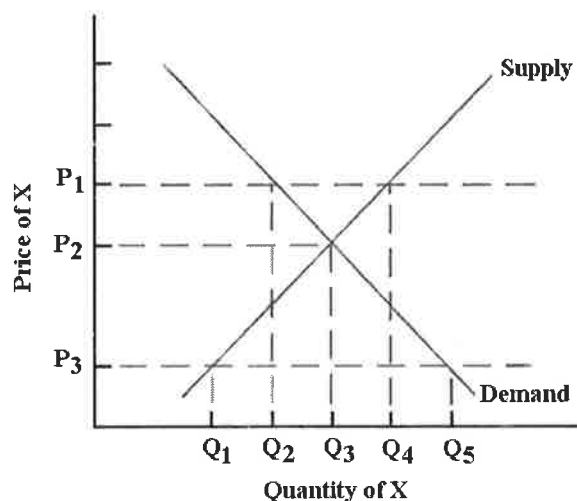


FIGURE 3-3

- 9) Refer to Figure 3-3. At a price of P₁ there is excess _____ in the market for X and pressure for the price to _____.
- A) supply; fall
 - B) supply; rise
 - C) demand; fall
 - D) demand; rise
 - E) none of the above

- 10) With a given upward-sloping supply curve for sirloin steak (a normal good), a rise in household income will cause the
- A) equilibrium price and equilibrium quantity of sirloin steak to both increase.
 - B) equilibrium price to increase and equilibrium quantity of sirloin steak to decrease.
 - C) equilibrium price and equilibrium quantity of sirloin steak to both decrease.
 - D) equilibrium price to decrease and equilibrium quantity of sirloin steak to increase.
 - E) equilibrium price to increase and equilibrium quantity of sirloin steak to remain constant.
- 11) Suppose that the quantity of beer demanded falls from 103 000 litres per week to 97 000 litres per week as a result of a 10 percent increase in its price. The price elasticity of demand for beer is therefore
- A) 0.6.
 - B) 6.0.
 - C) 1.97.
 - D) 1.03.
 - E) impossible to compute unless we know the before and after prices.
- 12) If the total expenditure on perfume increases when the price of perfume falls, the price elasticity of demand is
- A) greater than one (demand is elastic).
 - B) less than one (demand is inelastic).
 - C) unity (demand is unit elastic).
 - D) not determinable from the information given.
 - E) exactly zero.
- 13) The elasticity of supply for some product will tend to be larger
- A) the higher is the elasticity of demand for the product.
 - B) the lower is the elasticity of demand for the product.
 - C) the harder it is for firms to shift from the production of this product to another.
 - D) the easier it is for firms to shift from the production of this product to another.
 - E) the less time firms have to adjust to price changes.

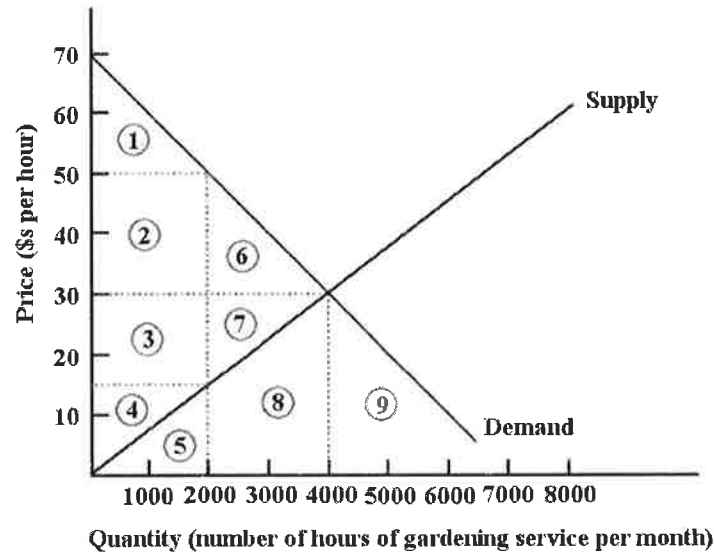


FIGURE 5-5

- 14) Refer to Figure 5-5. At the market-clearing price and quantity of \$30 per hour and 4000 hours of gardening services purchased, the economic surplus in the market is the sum of the areas
- below the demand curve, but above the market-clearing price of \$30, that is, areas 1, 2, 6.
 - below the demand curve, that is, areas 1, 2, 3, 4, 5, 6, 7, 8, 9.
 - above the supply curve, but below the market-clearing price of \$30, that is, areas 3, 4, 7.
 - above the supply curve and below the demand curve, that is, areas 1, 2, 3, 4, 6, 7.
 - below the demand curve, up to 400 hours, that is, areas 1, 2, 3, 4, 5, 6, 7, 8.

Number of Units	<i>Toffee (bars)</i>		<i>Cashews (bags)</i>	
	Marginal Utility	Total Utility	Marginal Utility	Total Utility
1	10	10	12	12
2	8	18	10	22
3	5	23	7	29
4	3	26	5	34
5	1	27	2	36
6	0	27	1	37
7	0	27	0	37

TABLE 6-1

- 15) Refer to Table 6-1. If the prices of toffee bars and bags of cashews are both \$1 and this consumer has \$7 per week to spend on these two snacks, how many of each will he/she purchase to maximize utility?
- 2 toffee bars and 5 bags of cashews.
 - 3 toffee bars and 4 bags of cashews.
 - 4 toffee bars and 3 bags of cashews.
 - 5 toffee bars and 2 bags of cashews.
 - 6 toffee bars and 1 bag of cashews.

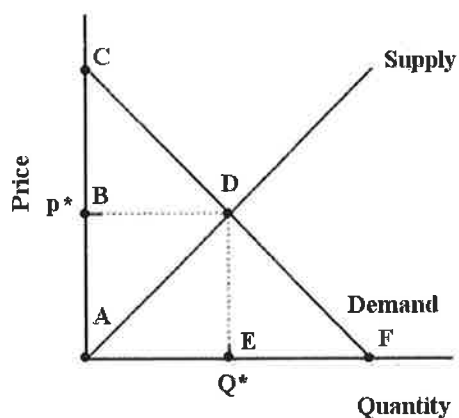


FIGURE 6-3

- 16) Refer to Figure 6-3. Suppose the market price is p^* . In this case, consumer surplus is outlined by the area
- A) ACDE B) ABDF C) ACF D) BCD E) ADE
- 17) If money income is reduced by half, and the prices of all goods consumed by the household are reduced by half, the household's budget line will
- A) not change.
 B) shift inward.
 C) shift outward.
 D) become steeper.
 E) become flatter.

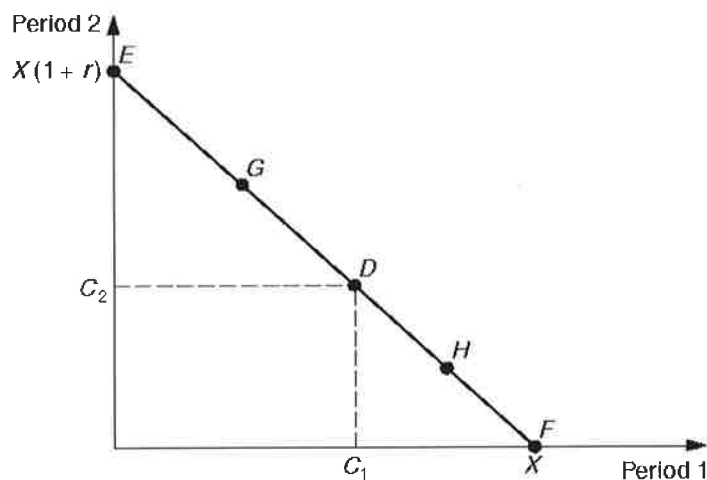


Figure Sup1-4

- 18) Refer to Figure Sup1-4. The figure shows a household's two-period budget constraint with the endowment point given by F. If it positions itself at point D, it consumes _____ in period 1 and saves _____ in period 1.
- A) C_1 ; $X(1+r) - C_1$
 B) C_2 ; C_1
 C) C_1 ; C_2
 D) C_2 ; $X - C_2$
 E) C_1 ; $X - C_1$

- 19) Suppose the tax rate on labour income is increased. As a result of this tax change, the opportunity cost of leisure
- A) decreases.
 - B) increases.
 - C) may be affected but we cannot tell without knowing how much labour is supplied by a given individual.
 - D) is unaffected if the individual chooses not to work in the labour market.
 - E) is unaffected no matter how much the individual chooses to work.
- 20) If "r" is the interest rate that prevails between the present and the future, then the opportunity cost of consuming \$1 today is \$_____ of lost future consumption.
- A) $1/r$ B) $1-r$ C) $1+r$ D) $1/(1+r)$ E) 1
- 21) The choices listed below involve costs to the firm. For which is the implicit cost potentially different than its explicit cost?
- A) The use of firm-owned assets.
 - B) The services of hired workers.
 - C) The use of rented land.
 - D) The interest paid on borrowed money.
 - E) The purchase of raw materials used in production.
- 22) Consider a firm in the short run. If the AP curve is rising, then the MP curve
- A) must lie above the AP curve over this range and must also be rising.
 - B) must lie above the AP curve over this range.
 - C) can be either above or below the AP curve, although it must be rising over the entire range.
 - D) must lie below the AP curve over this range.
 - E) must be falling.
- 23) In the short run, if average total cost is increasing as output rises, then
- A) total fixed costs must be increasing.
 - B) average fixed costs must be increasing.
 - C) average variable cost must be increasing.
 - D) marginal cost must be below average total cost.
 - E) average total cost is no longer equal to the sum of average variable cost and average fixed cost.
- 24) Suppose a widget business is using two inputs, labour and capital. Which of the following would happen if the price of labour increased?
- A) The firm will shut down.
 - B) The firm's average total cost curve will shift upward.
 - C) The firm's marginal cost curve will remain unchanged.
 - D) The firm would hire more labour.
 - E) The firm's average fixed cost curve will shift upward.
- 25) Suppose that a firm is using 100 units of labour and 50 units of capital to produce 200 fax machines per day. The price of labour is \$10 per unit and the price of capital is \$5 per unit. The MP_L equals 2 and the MP_K equals 5. In this situation,
- A) the firm is minimizing its costs.
 - B) the firm should increase the use of both inputs.
 - C) the firm could lower its production costs by decreasing labour input and increasing capital input.
 - D) the firm could lower its production costs by increasing labour input and decreasing capital input.
 - E) the firm should decrease the use of both inputs.

The figure below shows a family of cost curves for a firm. The subscripts 1, 2, and 3 for the SRATC curves refer to different plant sizes.

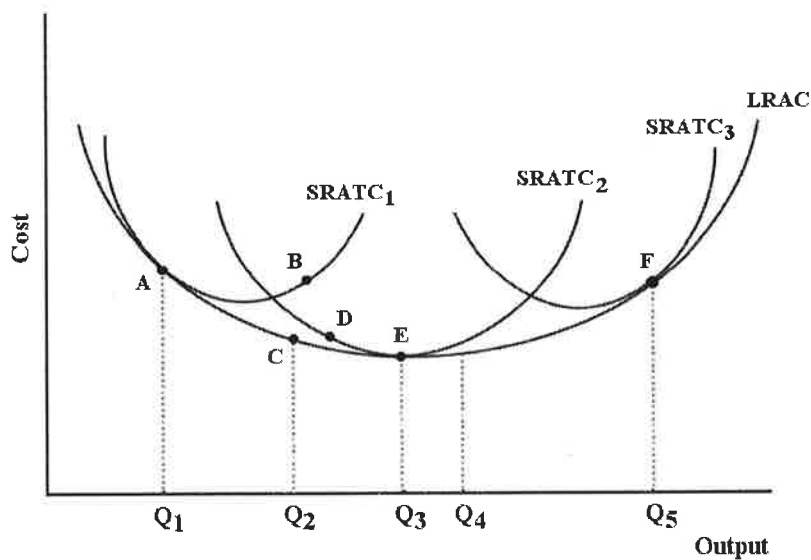


FIGURE 8-3

- 26) Refer to Figure 8-3. If this firm is producing the level of output associated with point B, then
- A) this firm is producing a level of output that is cost minimizing in the long run.
 - B) this firm is experiencing decreasing returns to scale.
 - C) this firm could produce the same level of output at a lower cost with plant size 2.
 - D) all of the above.
 - E) none of the above.
- 27) When economists say that a firm is a price taker they mean that
- A) the firm initially takes price as given and tries to influence it through advertising.
 - B) the firm can alter its rate of production and sales without affecting the market price of the product.
 - C) at the price prevailing in the market, the firm will be willing to sell an infinite quantity.
 - D) the demand curve that the firm faces is perfectly inelastic.
 - E) the firm can alter the market price as it changes its rate of production.
- 28) Consider a perfectly competitive firm that is producing a level of output such that price equals average total cost and average total cost is less than marginal cost. In order to maximize its profits,
- A) the firm should reduce output.
 - B) the firm should expand output.
 - C) the firm should shut down.
 - D) the firm should increase the market price.
 - E) the firm should not change output.
- 29) If firms in a competitive industry are suffering economic losses, then, in the long run
- A) demand for the product will shift to the left, causing equilibrium output and price to decline.
 - B) there would be no change in the number of firms in the industry as long as firms are covering their average variable costs.
 - C) the supply curve for the product will shift to the left as firms leave the industry, causing industry output to fall and price to rise.
 - D) the supply curve for the product will shift to the right as individual firms lower their prices to increase their sales.
 - E) each firm would raise its price until it was breaking even.

The table below shows the demand schedule for a product produced by a monopolist.

<i>Price</i>	\$8	\$7	\$6	\$5	\$4	\$3	\$2
<i>Quantity</i>	5	6	7	8	9	10	12

TABLE 10-1

- 30) Refer to Table 10-1. For a single-price monopolist, the marginal revenue associated with increasing sales from 5 to 6 units is
 A) -4. B) -2. C) 0. D) 2. E) 4.
- 31) Suppose all of the firms in a perfectly competitive industry form a cartel and agree to restrict output, thereby raising the price of the product. Individual Firm A will gain the most from the existence of the cartel if
 A) all firms, including A, cooperate and restrict output.
 B) Firm A restricts output, while the other firms do not.
 C) all firms, except Firm A, cooperate and restrict output.
 D) no firms restrict output.
 E) all firms revert back to their competitive outputs.
- 32) One reason movie theatres charge a lower admission price to senior citizens is that
 A) movie-theatre owners don't maximize their profits.
 B) government sets the price policies.
 C) senior citizens have a more elastic demand than other movie-goers.
 D) senior citizens have a less elastic demand than other movie-goers.
 E) senior citizens have higher incomes than other people.
- 33) In long-run equilibrium, firms in a monopolistically competitive industry operate where
 A) $P > AC$.
 B) $MR > MC$.
 C) AC is increasing.
 D) $AC >$ minimum average cost.
 E) $AC = MC$.
- 34) Suppose there are only two firms in an industry. If they each set a high price, they each earn \$5000. If they each set a low price, they each earn \$2500. If one firm sets a low price while the other sets a high price, the low-price firm earns \$7000 while the high-price firm earns \$1000. The Nash equilibrium:
 A) is that Firm 1 sets a high price and Firm 2 sets a low price
 B) is that Firm 1 sets a low price and Firm 2 sets a high price
 C) is that both firms set a low price
 D) is that both firms set a high price
 E) does not exist for this "game"

- 35) Consider two firms, A and B, that are producing the same product but with different marginal costs. In this case,
- A) a reallocation of output between the firms can lower the industry's total cost.
 - B) neither firm is producing its output at the lowest attainable cost.
 - C) some resources must be unemployed.
 - D) each firm is being wasteful.
 - E) the industry as a whole is operating at the lowest possible cost of production.

The diagram below shows supply, demand, and quantity exchanged of Monday matinee movie tickets. Assume it is a perfectly competitive market.

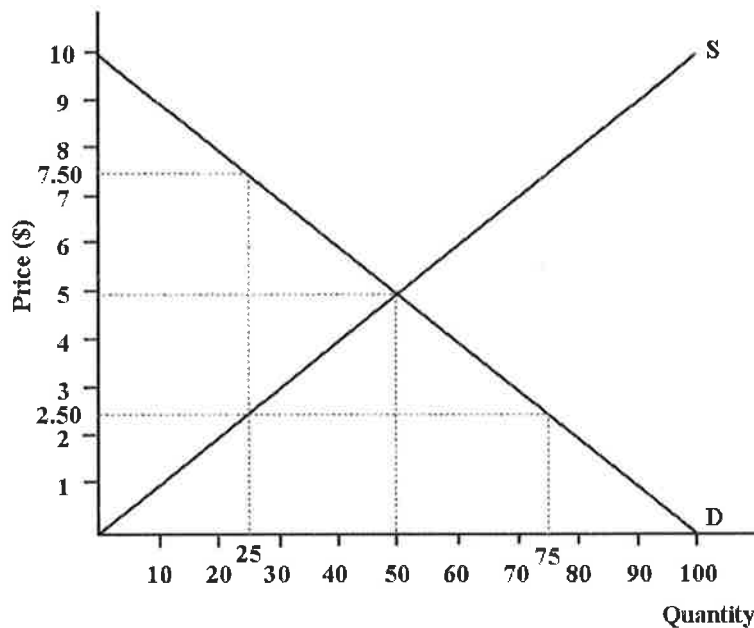


FIGURE 12-3

- 36) Refer to Figure 12-3. What is the total economic surplus generated in this market at the allocatively efficient level of output?
- A) \$5 B) \$10 C) \$125 D) \$250 E) \$500
- 37) Suppose we compare two monopolists with identical cost and demand conditions. Monopolist A charges a single price. Monopolist B engages in price discrimination, charging a different price for different units of the product. Which one of the following statements is correct?
- A) B will produce less than A, resulting in a larger deadweight loss B's market compared to A's.
 - B) B will generally produce more than A, resulting in a smaller deadweight loss in B's market compared to A's.
 - C) A will produce less than B, resulting in smaller deadweight loss in A's market compared to B's.
 - D) A will produce more than B, but the deadweight loss will be the same in both markets.
 - E) A and B will both produce the same amount and the deadweight loss will be the same in both markets.

The diagram below shows the domestic demand and supply curves for denim jeans in Canada. The prevailing world price is P_W . Assume that all jeans are identical.

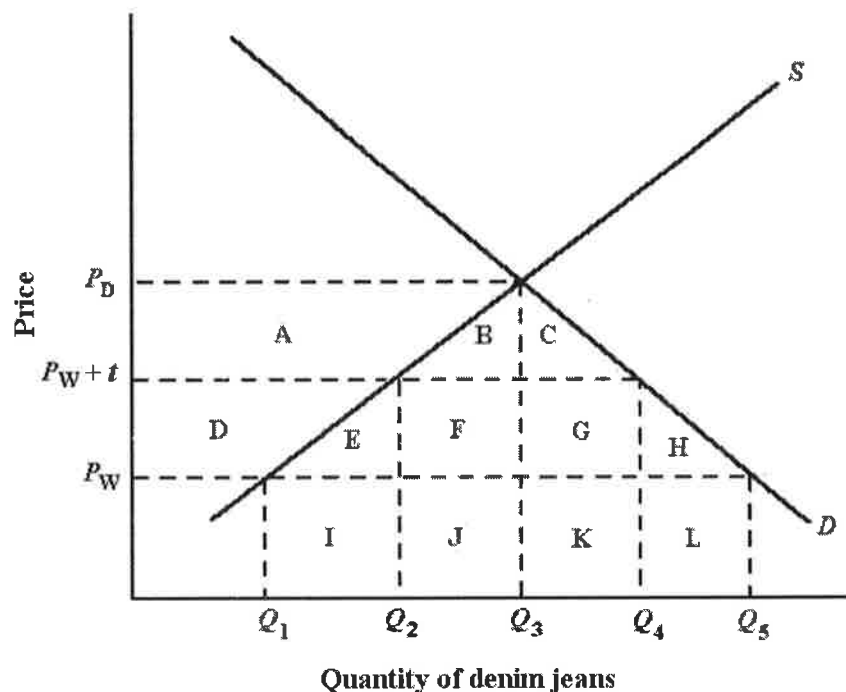


FIGURE 34-2

- 38) Refer to Figure 34-2. If Canada imposes a tariff of $\$t$ per pair of jeans, Canada's jean-producing firms will gain producer surplus equal to the area
- A) A. B) A + B + C. C) A + D. D) D. E) D + E + F + G + H.
- 39) Refer to Figure 34-2. If Canada imposes a tariff of $\$t$ per pair of jeans, the deadweight loss to the Canadian economy is represented by the area
- A) E + H. B) E + F + G + H. C) D + E + F + G + H. D) B + C. E) H.
- 40) The main difference between a tariff and an "equivalent" voluntary export restriction (VER) is that
- A) a tariff allows the government of the importing country to appropriate the extra market value of the imported good, but with a VER the extra market value accrues to the good's producers.
- B) a tariff allows the extra market value of the good to accrue to the supplier, but a VER allows the extra market value to be appropriated by the government of the importing country.
- C) a tariff restricts free trade between two countries and a VER does not.
- D) a tariff keeps the price in the importing country higher than it would otherwise be; a VER does not.
- E) none of the above.

Part B [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (41-48) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

- B.** Mark and Sally live alone on adjacent islands. Each has **6 hours per day** that they devote to gathering coconuts or gathering shellfish. The hourly productivity of each is given in the table below.

	Coconuts	Shellfish
Mark	2 per hour	1 per hour
Sally	1 per hour	2 per hour

In the space below you may want to sketch Mark's and Sally's production possibilities boundaries to help you answer the series of questions.

- 41) The maximum number of coconuts that Mark can gather in one day is
 A) 3. B) 6. C) 12. D) 18. E) 24.
- 42) For Sally, the opportunity cost of one more coconut is
 A) 1 hour. B) 2 hours. C) $\frac{1}{2}$ of a shellfish D) 1 shellfish. E) 2 shellfish.
- 43) Mark has
 A) An absolute advantage *and* a comparative advantage in shellfish.
 B) An absolute advantage *and* a comparative advantage in coconuts.
 C) An absolute advantage in coconuts *and* a comparative advantage in shellfish.
 D) An absolute advantage in shellfish *and* a comparative advantage in coconuts.
 E) None of the above.

Note: For the next five questions, assume that Mark and Sally each consider coconuts and shellfish to be perfect complements: i.e. they will always want to consume them in equal amounts.

- 44) With no trade, Mark and Sally will each produce and consume
- A) 1 coconut and 1 shellfish per day.
 - B) 2 coconuts and 2 shellfish per day.
 - C) 3 coconuts and 3 shellfish per day.
 - D) 4 coconuts and 4 shellfish per day.
 - E) 6 coconuts and 6 shellfish per day.
- 45) Suppose Mark and Sally decide to trade with each other. For the two of them to produce in the most economically efficient manner,
- A) Mark should specialize in coconuts and Sally in shellfish.
 - B) Sally should specialize in coconuts and Mark in shellfish.
 - C) Sally and Mark should both specialize in coconuts.
 - D) Sally and Mark should both specialize in shellfish.
 - E) it makes no difference what each produces.
- 46) Total production in the “world” economy made up of Mark and Sally is then
- A) 6 coconuts and 6 shellfish per day.
 - B) 12 coconuts and 12 shellfish per day.
 - C) 18 coconuts and 18 shellfish per day.
 - D) 0 coconuts and 18 shellfish per day.
 - E) 18 coconuts and 0 shellfish per day.
- 47) In order to trade, Mark and Sally have to agree on a relative price, i.e. the “terms of trade”. The following is the largest range of relative prices consistent with each of them agreeing to trade.
- A) Anything between 6 coconuts for 1 shellfish and 6 shellfish for 1 coconut.
 - B) Anything between 2 coconuts for 1 shellfish and 1 shellfish for 1 coconut.
 - C) Anything between 1 coconut for 1 shellfish and 2 shellfish for 1 coconut.
 - D) Anything between 2 coconuts for 1 shellfish and 2 shellfish for 1 coconut.
 - E) Anything between 12 coconuts for 1 shellfish and 12 shellfish for 1 coconut.
- 48) Suppose that Sally drives a hard bargain and manages to capture all of the gains from trade. Her consumption levels will be
- A) 4 coconuts and 4 shellfish per day.
 - B) 6 coconuts and 6 shellfish per day.
 - C) 8 coconuts and 8 shellfish per day.
 - D) 9 coconuts and 9 shellfish per day.
 - E) 12 coconuts and 12 shellfish per day.

Part C [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (49-56) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

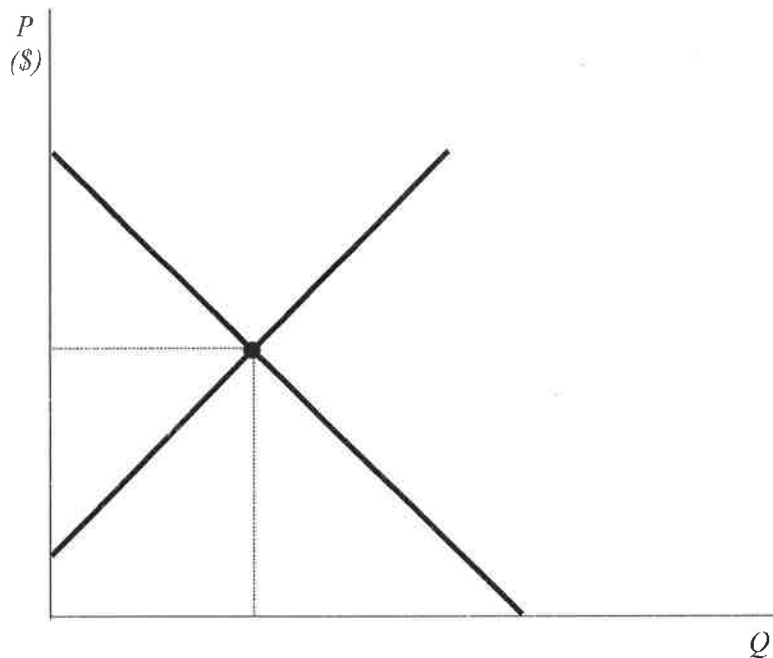
C. Suppose the Demand and Supply curves for a competitive market are as given below:

$$Q_d = 42 - 3P$$

$$Q_s = -6 + P$$

In the equations above, Q_d and Q_s are the quantities demanded and supplied and P is the price in dollars.

The diagram and space below is provided so you can keep track of your answers as you work through the series of questions.



- 49) For the Demand curve the “ P -intercept” is ____, and for the Supply curve the “ P -intercept” is ____.
A) 42; 6 B) 14; -6 C) 42; 14 D) 14; 6 E) 126; 6
- 50) The equilibrium price is equal to ____ and the equilibrium quantity is equal to ____.
A) \$9; 3 units B) \$6; 12 units C) \$12; 6 units D) \$3; 12 units E) \$42; 1 unit
- 51) In equilibrium, consumer surplus is equal to \$____ and producer surplus is equal to \$____.
A) 6; 18 B) 12; 36 C) 24; 18 D) 2; 24 E) 24; 36
- 52) At the equilibrium point the elasticity of demand is equal to ____.
A) 12 B) 6 C) 4 D) 3 E) 1.5
- 53) A decrease in the number of firms in the industry would lead to
A) an increase in total spending on the good.
B) an increase in the equilibrium quantity sold.
C) an uncertain effect on total spending on the good.
D) an uncertain effect on the equilibrium quantity sold.
E) a decrease in total spending on the good.
- 54) Suppose the government restricts the quantity sold in the market to 3 units through the use of a production quota system.
A) The price will be unaffected.
B) The price will now be equal to \$12.
C) The price will now be equal to \$9.
D) The price will now be equal to \$13
E) The price will change but we do not have enough information to calculate a new equilibrium price.
- 55) Given the production quota system outlined above in question 54), in the long-run the price of a unit of quota will be equal to \$____.
A) 14 B) 13 C) 12 D) 9 E) 4
- 56) As a result of the government’s action,
A) there is an efficient outcome in the market.
B) there is an inefficient outcome in the market, but the extent of the inefficiency cannot be measured.
C) there is a deadweight loss in the market equal to \$1.50.
D) there is a deadweight loss in the market equal to \$4.50.
E) there is a deadweight loss in the market equal to \$6.00.

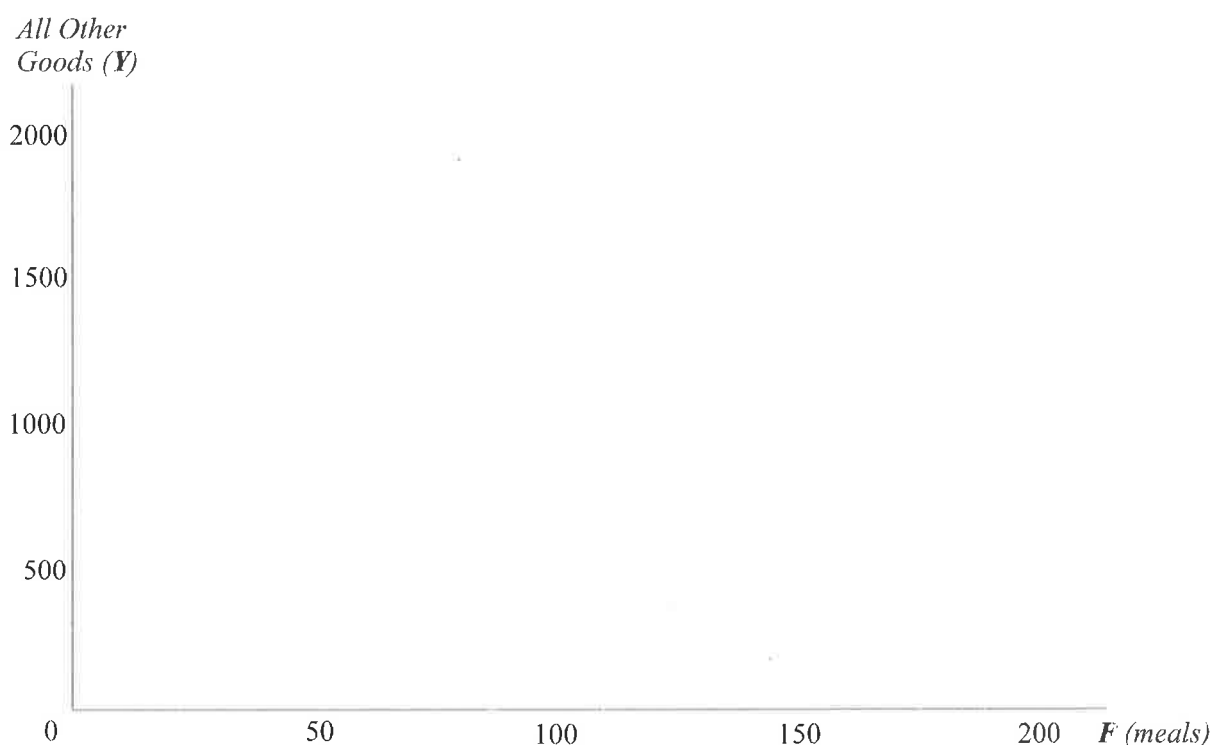
Part D [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (57-64) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

- D.** Suppose a consumer has \$2000 per month to spend on “food” (F) and a composite commodity Y representing “all other goods”. Assume initially that the price of food is \$10 per meal and that the price of Y is \$1, and that the consumer considers both “food” and “all other goods” to be normal goods.

The diagram below is provided so that you can sketch and keep track of your answers as you work through the series.



57) The equation of the consumer's budget line is given by:

- A) $Y/1 + F/10 = 2000$
- B) $10Y + F = 2000$
- C) $Y + 10F = 2000$
- D) $Y/1 + F/10 = 200$
- E) $Y + F = 2000$

58) If the consumer chooses to consume 90 meals per month, how much is spent on other goods?

- A) \$11
- B) \$110
- C) \$900
- D) \$1100
- E) \$2000

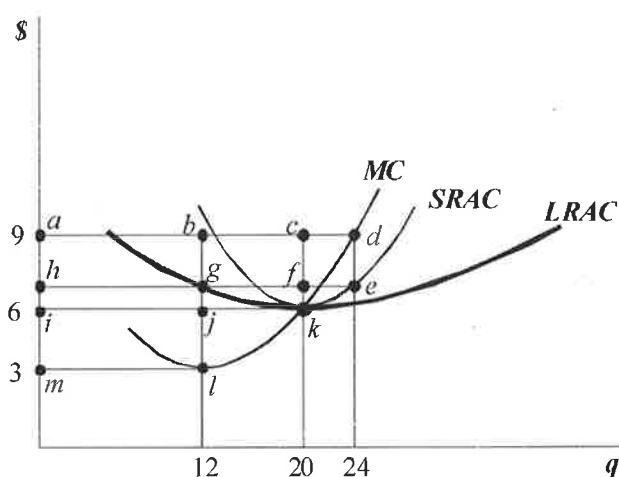
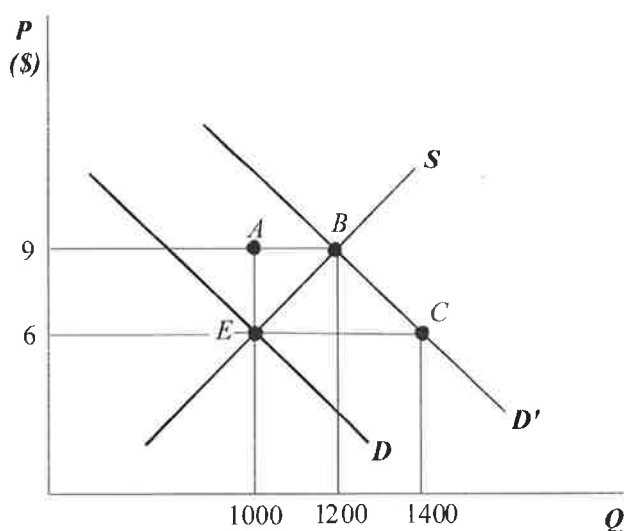
- 59) The consumer would choose the consumption point identified above in question 58) because
- A) the highest reachable indifference curve is tangent to the budget line at this point.
 - B) consumers always spend unequal amounts on each good.
 - C) consumers always spend equal amounts on each good.
 - D) this combination of goods leaves money for alternative goods not included in the question.
 - E) the highest reachable indifference curve crosses the budget line from above at this point.
- 60) Suppose the price of food increases to \$20 per meal. The substitution effect will favour
- A) more F and less Y , while the income effect will favour more of both.
 - B) more F and less Y , while the income effect will favour less of both.
 - C) less F and more Y , while the income effect will favour more of both.
 - D) more of both goods, while the income effect will favour less of both.
 - E) less F and more Y , while the income effect will favour less of both.
- 61) Suppose that, in response to the price change, the consumer ends up consuming 45 meals. From this information, we can infer
- A) nothing about the elasticity of the consumer's demand curve for F without knowing the elasticity of the consumer's demand for Y .
 - B) that the elasticity of the consumer's demand curve for F is less than one.
 - C) that the elasticity of the consumer's demand curve for F is equal to one.
 - D) that the elasticity of the consumer's demand curve for F is greater than one.
 - E) that the consumer's demand curve for Y is upward sloping.
- 62) Suppose the government, seeing the increase in the price of food becomes concerned about the welfare of the consumer. It sets up a program that transfers to the consumer \$900 per month. If the consumer chooses 90 meals how much is spent on other goods?
- A) \$11 C) \$110 D) \$900 D) \$1100 E) \$2000
- 63) As a result of the program, we can be sure that the consumer will choose
- A) fewer than 90 meals per month.
 - B) 45 meals per month.
 - C) 90 meals per month.
 - D) 135 meals per month.
 - E) between 90 and 135 meals per month.
- 64) As a result of the program, we can say
- A) that the consumer is worse off than before the price change and the program.
 - B) that the consumer is better off than before the price change and the program.
 - C) that the consumer is no better or worse off than before the price change and the program.
 - D) that the consumer's tastes would change after the price change and institution of the program.
 - E) nothing about the welfare of the consumer before and after without more information.

Part E [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (65-72) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

- E.** The top panel in the figure below shows a perfectly competitive market that is subject to a permanent increase in demand. Assume that the market was originally in long-run equilibrium, and that all firms in the industry are identical to the one shown in the lower panel of the figure.



- 65) In the original long-run equilibrium, the market price equals ____ and the firm is producing a quantity equal to ____.
- A) \$3; 12 units B) \$6; 12 units C) \$6; 20 units D) \$6; 24 units E) \$9; 24 units

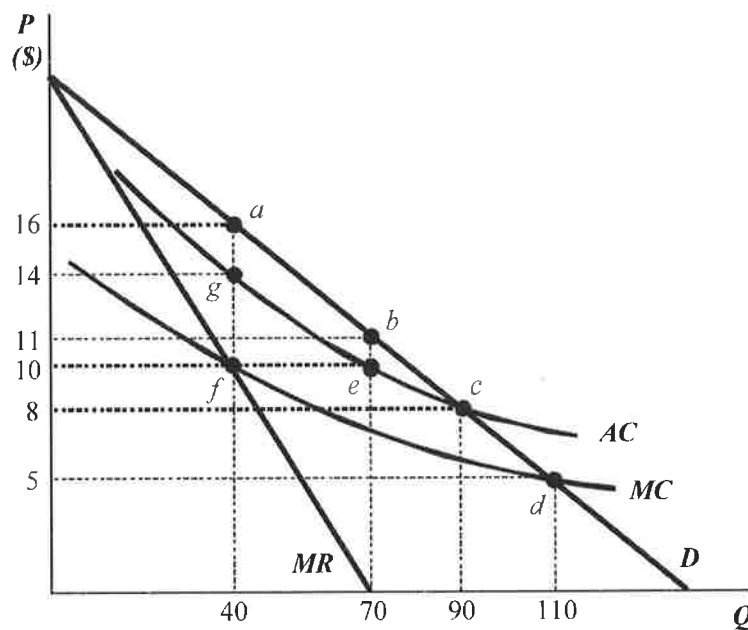
- 66) In the original long-run equilibrium, the number of firms in the industry
- A) cannot be determined without more information
 - B) is equal to 1
 - C) is equal to 100
 - D) is equal to 70
 - E) is equal to 50
- 67) After the demand shift, in the *new short-run equilibrium*, the market price is equal to ____ and the firm is producing ____.
- A) \$3; 12 units B) \$6; 20 units C) \$6; 24 units D) \$9; 20 units E) \$9; 24 units
- 68) After the demand shift, in the *new short-run equilibrium*, the firm will be earning profits equal to ____.
- A) plus area *adeh*
 - B) plus area *acki*
 - C) plus area *ijlm*
 - D) plus area *abgh*
 - E) zero
- 69) After the demand shift, in the *new long-run equilibrium*, the market price is equal to ____ and the firm is producing ____.
- A) \$3; 12 units B) \$6; 20 units C) \$6; 24 units D) \$9; 20 units E) \$9; 24 units
- 70) After the demand shift, in the *new long-run equilibrium*, the number of firms in the industry
- A) cannot be determined without more information
 - B) is equal to 1
 - C) is equal to 100
 - D) is equal to 70
 - E) is equal to 50
- 71) Now suppose that as a result of the demand shift and the increasing industry output, the price of an important industry input is increased in the long run such that the minimum long run average cost for each of the firms is now \$8. Under this assumption, the new long run equilibrium price
- A) cannot be determined without more information
 - B) is \$3
 - C) is \$6
 - D) is \$8
 - E) is \$9
- 72) Under the increasing cost assumption explained in question 71), after the demand shift, in the *new long-run equilibrium*, the number of firms in the industry
- A) cannot be determined without more information
 - B) is equal to 1
 - C) is equal to 100
 - D) is equal to 70
 - E) is equal to 50

Part F [8 marks]

Answer all 8 questions; each question is worth 1 mark.

The following 8 questions (73-80) relate to the information given below. Try to do the questions in order since the answers for some questions depend on the answers to previous questions in the series.

F. The figure below shows the marginal cost curve (MC), average cost curve (AC), demand curve (D) and marginal revenue curve (MR) facing a monopolist.



- 73) In the diagram, marginal revenue is less than price at any given level of output because
- of the unique form of the demand curve in this market.
 - in order to sell an additional unit of output the firm must lower the price of that marginal unit of output.
 - in order to sell an additional unit of output the firm must lower the price on all units of output.
 - in order to lower the price the monopolist must restrict output.
 - total revenue is always declining with more units sold.
- 74) This market would be considered a “natural monopoly” because (over the relevant range of output)
- average cost is declining.
 - marginal cost is below average cost.
 - the firm is experiencing economies of scale.
 - one firm is able to produce any given level of output cheaper than two firms could.
 - all of the above are true.

- 75) The profit maximizing price and quantity for the monopolist are:
A) \$16; 40 B) \$11; 70 C) \$10; 40 D) \$8; 90 E) \$5; 110
- 76) The firm earns profits equal to:
A) zero B) \$70 C) \$80 D) \$240 E) \$770
- 77) The deadweight loss in the market is equal to _____.
A) zero
B) area *a-d-f*
C) area *a-c-g*
D) area *b-c-e*
E) area *g-e-f*
- 78) If the government decides to regulate this market using a “marginal cost pricing” approach, the price and quantity will equal:
A) \$16; 40 B) \$11; 70 C) \$10; 40 D) \$8; 90 E) \$5; 110
- 79) Under “marginal cost pricing” regulation, the deadweight loss from monopoly is _____ and the government must _____ the firm.
A) reduced somewhat; subsidize
B) eliminated; subsidize
C) eliminated; tax
D) increased; tax
E) reduced somewhat; tax
- 80) Suppose instead that the government uses “average cost pricing” regulation. Under this system, output will equal _____ and the firm will earn profits equal to _____.
A) 40; zero
B) 90; + \$270
C) 70; - \$140
D) 90; zero
E) 70; zero