CollegeBoard
Advanced Placement Program

AP® Microeconomics
2009 Free-Response Questions

MICROECONOMICS

Section II

Planning time—10 minutes

Writing time—50 minutes

Directions: You have 50 minutes to answer all three of the following questions. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. 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. Use a pen with black or dark blue ink.

1. CableNow is the only supplier of cable TV services offering a wide range of TV channels. CableNow is an unregulated firm and is currently earning an economic profit. Assume that CableNow does not practice price discrimination.

   (a) Draw a correctly labeled graph for CableNow and show each of the following. Make sure your graph is large enough to be legible.

      (i) The profit-maximizing quantity of cable services, labeled as Q*

      (ii) The profit-maximizing price, labeled as P*

      (iii) The area of economic profit, completely shaded

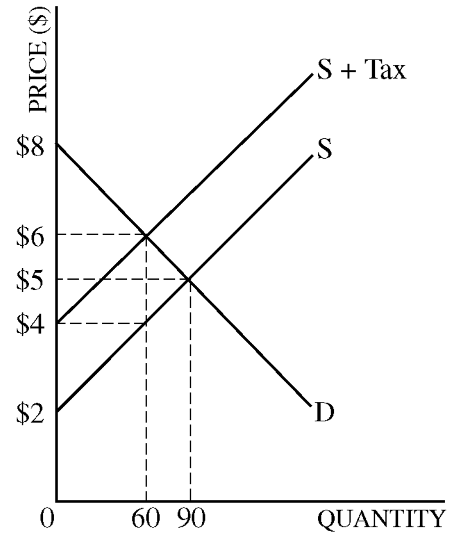
      (iv) The socially optimal level of cable services, assuming no externalities, labeled as Q_S

   (b) Assume that the government grants CableNow a lump-sum subsidy of $1 million. Will this policy change CableNow's profit-maximizing quantity of cable services? Explain.

   (c) Instead of granting a subsidy, assume now that the government chooses to require CableNow to produce the quantity at which CableNow earns zero economic profit. On the graph you drew in part (a), label this quantity Q_R.

   (d) At Q_R, is the firm's accounting profit positive, negative, or zero? Explain.

   (e) Assume that a new study reveals there are external benefits associated with watching TV. Will the socially optimal quantity of cable services now be larger than, smaller than, or equal to the Q_S you identified in part (a)(iv) ?



2. The graph above illustrates the market for calculators. S denotes the current supply curve, and D denotes the demand curve.

   (a) Calculate the producer surplus before the tax.

   (b) Now assume a per-unit tax of $2 is imposed whose impact is shown in the graph above.

      (i) Calculate the amount of tax revenue.

      (ii) What is the after-tax price that the sellers now keep?

      (iii) Calculate the producer surplus after the tax.

   (c) Is the demand price elastic, inelastic, or unit elastic between the prices of $5 and $6 ? Explain.

   (d) Assuming no externalities, how does the tax affect allocative efficiency? Explain.

3. Two competing retail firms, Red Shop and Blue Mart, are studying potential locations for new stores in the suburbs of a major city. Each firm must choose between a location north of the city and a location south of the city. The payoff matrix is shown below, with the first entry in each cell indicating Red Shop's daily profit and the second entry indicating Blue Mart's daily profit. Both firms know all of the information in the payoff matrix.

		Blue Mart	
		North	South
Red Shop	North	$900, $1,800	$3,000, $3,500
	South	$5,000, $4,000	$1,500, $1,000

(a) If Red Shop chooses a location south of the city, which location is better for Blue Mart? Explain.

(b) Is choosing a location to the south of the city a dominant strategy for Red Shop? Explain.

(c) If the two firms cooperate in choosing locations, where will each firm locate?

(d) Assume that the south suburb has enacted an incentive package to attract new business. Any firm that locates south of the city will receive a subsidy of $2,000 per day. Redraw the payoff matrix to include the subsidy.

STOP

END OF EXAM