

2008 AP[®] MICROECONOMICS 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. Callahan's Orchard grows apples and operates in a constant-cost, perfectly competitive apple industry. Callahan's Orchard is currently in long-run equilibrium.
 - (a) Draw correctly labeled side-by-side graphs for the apple market and Callahan's Orchard, and show each of the following.
 - (i) Market output and price, labeled as " Q_M " and " P_M ", respectively
 - (ii) Callahan's output and price, labeled as " Q_F " and " P_F ", respectively
 - (b) Now assume that the government provides farm support to apple growers by granting an annual lump-sum subsidy to all apple growers. Indicate the effect the subsidy would have on each of the following in the short run.
 - (i) Callahan's quantity of output. Explain.
 - (ii) Callahan's profit
 - (iii) The number of firms in the industry
 - (c) Indicate how each of the following will change in the long run as a result of the lump-sum subsidy.
 - (i) The number of firms in the industry. Explain.
 - (ii) Price
 - (iii) Industry output

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2. Utility and price elasticity of demand are important concepts in explaining consumer behavior.

(a) Define marginal utility.

(b) The table below shows the quantities, prices, and marginal utilities of two goods, fudge and coffee, which Mandy purchases.

	Fudge	Coffee
Quantity of purchase	10 pounds	7 pounds
Price per pound	\$2	\$4
Marginal utility of last pound	12	20

Mandy spends all her money and buys only these two goods. In order to maximize her utility, should Mandy purchase more fudge and less coffee, purchase more coffee and less fudge, or maintain her current consumption? Explain.

(c) Assume that consumers always buy 20 units of good R each month regardless of its price.

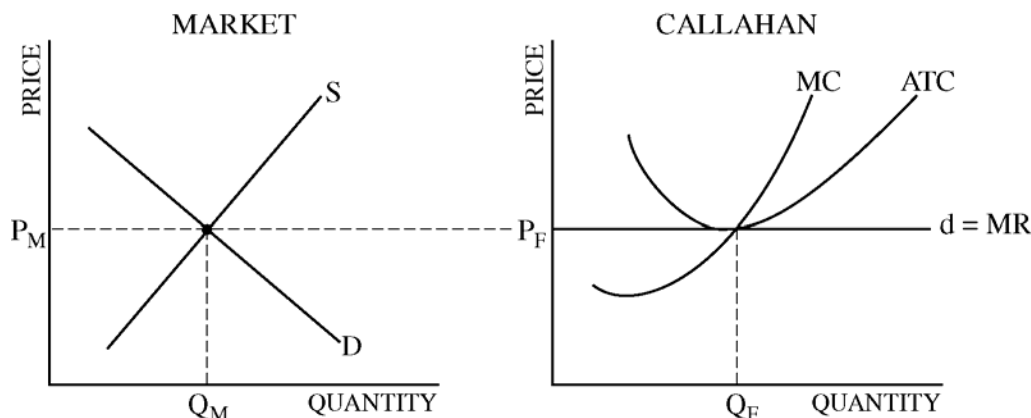
(i) What is the numerical value of the price elasticity of demand for good R?

(ii) If the government implements a per-unit tax of \$2 on good R, how much of the tax will the seller pay?

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2008 SCORING GUIDELINES

Question 1

12 points (4 + 4 + 4)



(a) 4 points:

- One point is earned for a correctly labeled graph of the apple market, with P_M and Q_M properly indicated.
- One point is earned for showing that the firm's price equals the market price.
- One point is earned for the tangency of flat firm demand (P_F) and ATC.
- One point is earned for Q_F where $MR (P) = MC$.

(b) 4 points:

- One point is earned for concluding that the lump-sum subsidy will have no impact on Callahan's output.
- One point is earned for explaining that the lump-sum subsidy will not affect MC (or MR).
- One point is earned for concluding that Callahan's profit will increase.
- One point is earned for concluding that the number of firms in the industry will not change.

(c) 4 points:

- One point is earned for concluding that the number of firms in the industry will increase.
- One point is earned for explaining that the existence of profits attracts new firms.
- One point is earned for concluding that the price will fall.
- One point is earned for concluding that industry output will increase.