

1) Accounts-R-Us creates inventory software for manufacturing firms and this is a monopolistically competitive industry. The company is currently operating at profit maximizing production levels for its product UrStuffWhere, but is operating at a loss.

a) Draw a correctly labeled graph for Accounts-R-Us and show each of the following:

- i) The level of output and price.
- ii) The area of loss.

b) Under what conditions will the company continue production at a loss?

c) The nation experiences growth and demand for software increases such that Accounts-R-Us is now earning short-run economic profits. How will each of these change in the long run?

- i) The number of firms in the industry
- ii) Accounts-R-Us profit.

d) In the long run will the Accounts-R-Us allocatively efficient? Explain.

e) In the long run will the Accounts-R-Us productively efficient? Explain.

2) Mary's Orchard, a large resort island, has two propane distributors. The cost of propane has recently jumped up while the economy has gotten worse. Both companies are reconsidering their pricing strategy. The payoff matrix below shows the potential profits for the two firms in different circumstance. The first number shows the profit of one firm, Deck Propane, and the second number shows the profit of the other firm, BigYard Propane. Both companies are considering either raising prices to pass on the cost increase to the customers or not raising price to try to undercut the competition. Both companies are familiar with each others' operations enough to accurately guess all the numbers in the table.

		BigYard	
		Increase Prices	Hold Prices
Deck	Increase Prices	\$5,000, \$6,000	\$4,300, \$4,000
	Hold Prices	\$4,000, \$4,300	\$4,650, \$3,700

a) Is there a dominant strategy for Deck? Explain.

b) Is there a dominant strategy for BigYard? Explain.

c) Assume the firms do not collude, what decision which each firm make? What will the resulting profit for each firm be?

d) If the two firms collude, what decision will they jointly reach? What will the resulting profit for each firm?

3. Suppose that roses are produced in a perfectly competitive, increasing-cost industry in long-run equilibrium with identical firms.
- (a) Draw correctly labeled side-by-side graphs for the rose industry and a typical firm and show each of the following.
 - (i) Industry equilibrium price and quantity, labeled P_m and Q_m , respectively
 - (ii) The firm's equilibrium price and quantity, labeled P_f and Q_f , respectively
 - (b) Is P_m larger than, smaller than, or equal to P_f ?
 - (c) Assume that there is an increase in the demand for roses. On your graphs in part (a), show each of the following.
 - (i) The new short-run industry equilibrium price and quantity, labeled P_{m2} and Q_{m2} , respectively
 - (ii) The new short-run profit-maximizing price and quantity for the typical firm, labeled P_{f2} and Q_{f2} , respectively
 - (d) As the industry adjusts to a new long-run equilibrium,
 - (i) what will happen to the number of firms in the industry? Explain.
 - (ii) will the firm's average total cost curve shift upward, shift downward, or remain unchanged?
 - (e) In the long run, compare the firm's profit-maximizing price to each of the following.
 - (i) P_f in part (a)(ii)
 - (ii) P_{f2} in part (c)(ii)