Problem 1:

1) Assume the widget industry is perfectly competitive. Joe's Widgets is a typical, profit-maximizing widget firm and is earning economic profit. For a given market price, draw a correctly labeled graph for Joe's firm, showing each of the following:

a) Marginal Revenue
b) Output
c) Economic profits

2) Using the assumptions in (a), draw correctly labeled side-by-side graphs for the industry and a typical firm.

a) Given the typical firm is experiencing economic profits, show on the graphs how the industry adjusts in the long run and explain the process that leads to the long-run equilibrium.
b) On the graphs for the industry and the typical firm in long-run equilibrium, show each of the following:
(1) Price
(2) Output

3) Assume that consumer activists lobby the government to set a market price for widgets at less than the market equilibrium price. However, the price is set at a price that is higher than the typical firm's average variable cost for most levels of reasonable levels of production. Indicate the change that will occur in each of the following for the typical firm and explain why change occurs.

a) Marginal revenue
b) Level of output
c) Short-run total cost
d) Short-run total revenue

Problem 2:

The market for white ceramic mugs is perfectly competitive. MyKup produced white ceramic mugs and sells them at $4 a mug. Make the artificial assumption that skilled labor is the only resource used in production. Workers cost $60 dollars an hour. Below is the short run production function for MyKup:

Number of workers per hour	0	1	2	3	4	5	6
Cups produced per hour	0	20	52	72	88	98	104

a) Is this production function consistent with the law of diminishing marginal returns? Explain how the above data support your answer.

b) Calculate the marginal product provided by the fourth worker.

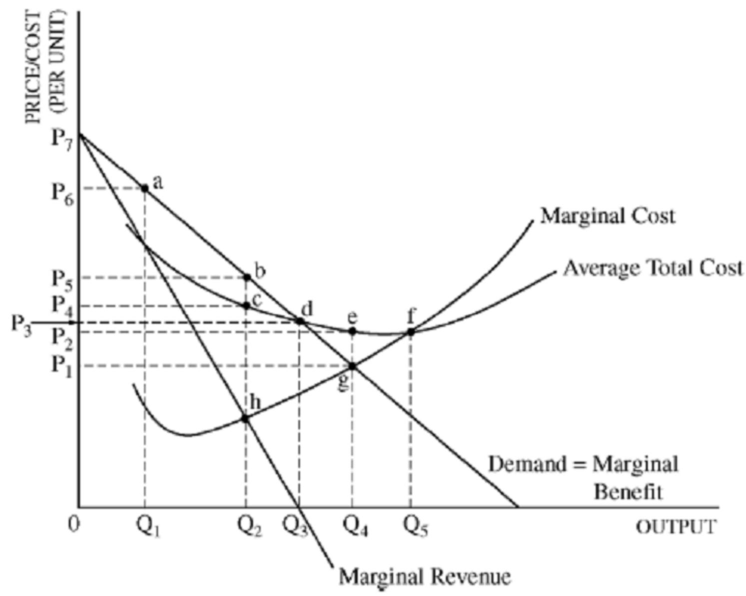
c) Calculate the marginal revenue provided by the fifth worker.

d) If MyKup is profit maximizing, how many workers should the firm hire?

e) Assume MyKup has fixed costs of $50, what would the company's short-run economic profit be if it hires 3 workers?

f) Explain how MyKup's hiring practice will respond if the price of mugs increases.

Problem 3:



1) The graph above represents the cost curves for firm Y in industry X. The firm does not have the ability to practice price discrimination.

   a) Using the labels provided on the graph identify the firm's profit maximizing level of output. Explain.

   b) Identify the price associated with that quantity. Explain.

2) Instead of profit maximizing, assume this firm is revenue maximizing.

   a) Using the labels provided on the graph identify the firm's revenue maximizing level of output. Explain.

   b) Identify the price associated with that quantity.

3) The market and/or government intervention can force the firm to produce at different levels of output. Assume the firm produces at the quantity associated with allocatively efficiency.

   a) Explain how the firm would find the allocatively efficient level of output.

   b) Identify the price associated with that quantity.

4) Assume the firm is producing at the allocatively efficient level of output.

   a) Would the firm experience profit or loss? If so, using the labeling on the graph, indicate the area of profit or loss.

   b) Using the labeling on the graph identify the consumer surplus at this level of output.

5) Assume the market and/or government forces the firm to produce at the breakeven point. Use the labeling on the graph to identify this quantity and the price associated with that quantity.

Problem 4:

Assume the alarm clock industry is a perfectly competitive, constant cost industry which is in long run equilibrium.

a) HapeeTyme is an alarm clock producer. Draw correctly labeled side-by-side graphs showing the alarm clock market and HapeeTyme.

i) Indicate the market price and quantity.

ii) Indicate HapeeTyme's output and the price the firm receives.

b) As the domestic clock industry is facing foreign competition, the government decides to grant an annual subsidy to each clock producer in the form of a single, annual, lump sum payment. Indicate the effect the government action would have in the short run on the following:

i) HapeeTyme's output and profit. Explain

ii) Market equilibrium output and price. Explain

c) Assume the government continues the lump sum payments. Indicate how this will change the market equilibrium price and quantity in the long run.

Problem 5:

FDA procedures, combined with patent laws can give drug manufactures a certain window of time in which they exclusively provide effective treatments for an ailment. Drugs Unlimited ("You can't have drugs without DU") recently got FDA approval and a patent on an effective treatment for a fairly common congenital heart ailment.

a) Assume that DU's costs are such that it is can sell at a price that earns and economic profit. Draw a correctly labeled graph and show the profit-maximizing price and quantity.
b) Six months after DU's drug hits the market, consumer advocates, citing DU's excess profits and government resources used by DU in developing the drug, get the government to impose a lump-sum tax on DU.
c) What will happen to output and the market price?