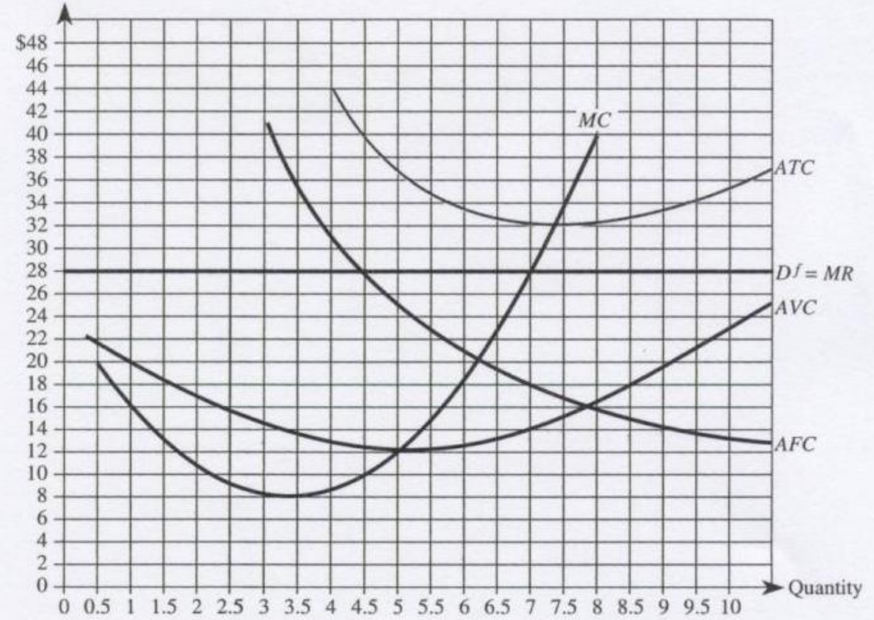
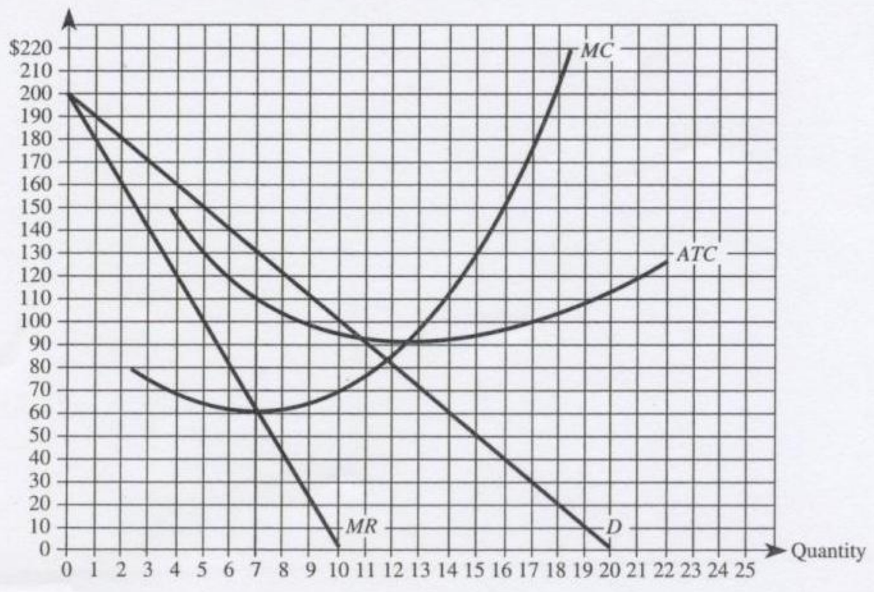
1. The accompanying graph (top of next page) summarizes the demand and costs for a firm that operates in a perfectly competitive market.
   a. What level of output should this firm produce in the short run?
   b. What price should this firm charge in the short run?
   c. What is the firm's total cost at this level of output?
   d. What is the firm's total variable cost at this level of output?
   e. What is the firm's fixed cost at this level of output?
   f. What is the firm's profit if it produces this level of output?
   g. What is the firm's profit if it shuts down?
   h. In the long run, should this firm continue to operate or shut down?



3. The accompanying graph (bottom of this page) summarizes the demand and costs for a firm that operates in a monopolistically competitive market.
   a. What is the firm's optimal output?
   b. What is the firm's optimal price?
   c. What are the firm's maximum profits?
   d. What adjustments should the manager be anticipating?



4. You are the manager of a monopoly, and your demand and cost functions are given by $P = 200 - 2Q$ and $C(Q) = 2{,}000 + 3Q^2$, respectively.
   a. What price–quantity combination maximizes your firm's profits?
   b. Calculate the maximum profits.
   c. Is demand elastic, inelastic, or unit elastic at the profit-maximizing price–quantity combination?
   f. Is demand elastic, inelastic, or unit elastic at the revenue-maximizing price–quantity combination?