

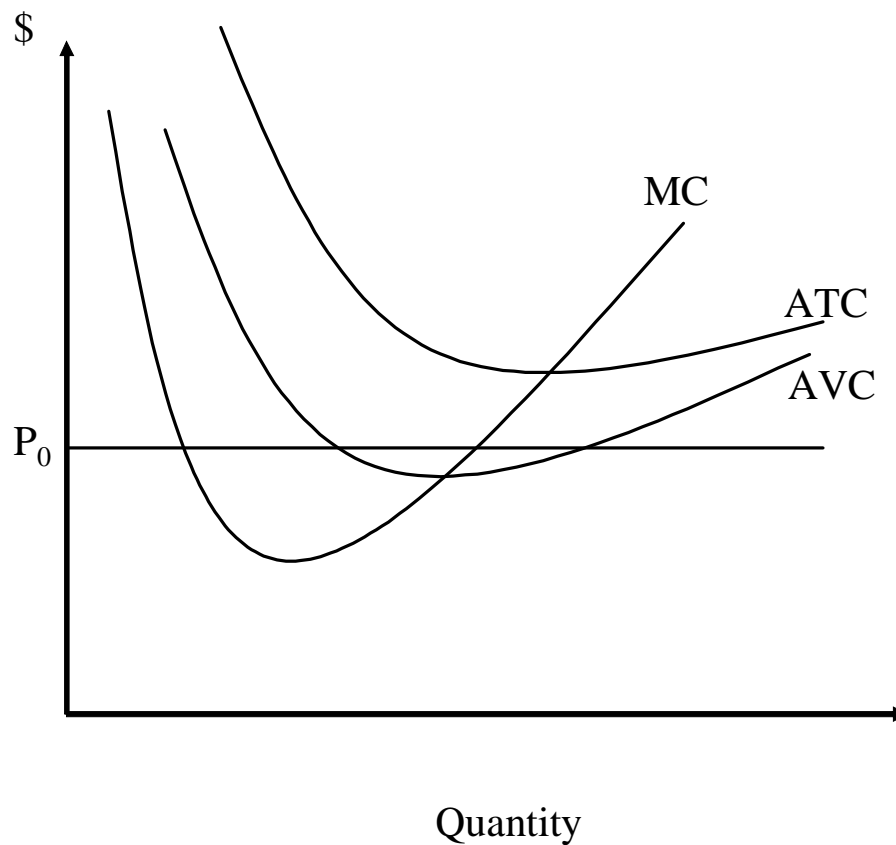


5. Suppose a firm has fixed cost of  $FC = \$100$  and variable cost equal to  $VC = Q + Q^2/2$ . If the price is equal to \$10, how much should this firm produce in the short run?
- a. 0.
  - b. 9.
  - c. 14.
  - d. 17.

6. What is the price elasticity of supply when the supply curve is  $Q_S = 8P - 16$  and the price is  $P = 4$ ?
- a. -2
  - b. -1/2
  - c. 1/2
  - d. 2

7. Consider the demand  $P = 850 - 20Q$ . If a monopoly's marginal costs are  $MC = 50$ , what are the monopoly's optimal equilibrium price and quantity if it is optimal for the monopoly to produce?
- $P^* = \$40$  and  $Q^* = 50$ .
  - $P^* = \$50$  and  $Q^* = 40$ .
  - $P^* = \$450$  and  $Q^* = 20$ .
  - $P^* = \$50$  and  $Q^* = 20$ .
8. Which of the following statements is **false**?
- A monopoly will choose an output where the price of the product equals the marginal cost of production.
  - A monopoly will produce output in the short run only if the price exceeds the average variable cost.
  - A monopoly will never produce where demand is inelastic.
  - A monopoly has no supply curve.

9. The figure below illustrates a firm's average total cost curve, average variable cost curve, and marginal cost curve. It also illustrates the equilibrium market price.
- What are a perfectly competitive firm's three short-run profit maximizing conditions?
  - Given these three conditions, label the firm's optimal short-run level of output  $Q_0$  on the figure below.
  - On the figure below, illustrate the firm's short-run profit/loss.
  - On the figure below, illustrate the firm's short-run supply curve.



10. The Figure below shows the **linear** demand (D) faced by a monopolist as well as its short-run marginal costs (MC), average variable costs (AVC), and average total costs (ATC).
- Sketch the marginal revenue curve for this **linear** demand on the Figure below and label it MR.
  - Show the monopolist's optimal level of output and price labeling them  $Q^*$  and  $P^*$ .
  - Will this monopolist earn positive or negative economic profit in the short run?
  - Use the figure to explain why many economists consider monopolies to be inefficient.

