Chapter 13
Perfect Competition

13.1 A Firm's Profit-Maximizing Choices

1) A market with a large number of sellers
   A) can only be a perfectly competitive market.
   B) might be an oligopoly or a perfectly competitive market.
   C) might be a monopolistically competitive or a perfectly competitive market.
   D) might be a perfectly competitive, monopolistically competitive, oligopoly, or monopoly market.
   E) can only be a monopolistically competitive market.

   Answer: C
   *Topic: Market types
   *Skill: Level 1: Definition
   *Objective: Checkpoint 13.1
   *Author: SA

2) A perfectly competitive firm
   A) sells a product that has perfect substitutes.
   B) has a perfectly inelastic demand.
   C) has a perfectly elastic supply.
   D) Answer A and answer B are correct.
   E) Answer A and answer C are correct.

   Answer: A
   *Topic: Perfect competition, definition
   *Skill: Level 1: Definition
   *Objective: Checkpoint 13.1
   *Author: SA
3) In which market structure do firms exist in very large numbers, each firm produces an identical product, and there is freedom of entry and exit?
   A) monopoly
   B) oligopoly
   C) only perfect competition
   D) only monopolistic competition
   E) either perfect competition or monopolistic competition

Answer: C

Topic: Perfect competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: PH

4) The characteristics that describe a perfectly competitive industry include
   A) many firms selling an identical product.
   B) one firm selling to many buyers.
   C) many firms selling a slightly differentiated product.
   D) a few firms selling to many buyers.
   E) None of the above answers is correct.

Answer: A

Topic: Perfect competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: WM

5) One requirement for an industry to be perfectly competitive is that in the industry there
   A) are a few firms who control the market.
   B) are many firms for whom the efficient scale of production is small.
   C) is one firm that sells a product with no close substitutes.
   D) are many firms selling different products.
   E) is a barrier to entry that makes the entry of new firms difficult.

Answer: B

Topic: Perfect competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: JC
6) One requirement for an industry to be perfectly competitive is that
   A) there are no restrictions on entry into or exit from the market.
   B) there are multiple restrictions on entry into or exit from the market.
   C) there are many firms selling different products.
   D) sellers and buyers have imperfect information about prices.
   E) the many firms sell slightly different products.
   Answer: A

7) One requirement for an industry to be perfectly competitive is that
   A) sellers and buyers have imperfect information about prices.
   B) established firms have no advantage over new firms.
   C) established firms have a significant advantage over new firms.
   D) different firms produce widely different products.
   E) many firms produce slightly different products.
   Answer: B

8) A perfectly competitive market arises when
   A) the market demand is small relative to the output of a firm.
   B) there are many buyers but few sellers.
   C) the market demand is very large relative to the output of one seller.
   D) a firm has control over a unique resource.
   E) each of the many firms produces a slightly different product.
   Answer: C
9) Each firm in a perfectly competitive industry
   A) produces a good that is slightly different from that of the other firms.
   B) produces a good that is identical to that of the other firms.
   C) attains economies of scale so that its efficient size is large compared to the market as a whole.
   D) has control over at least one unique resource to separate themselves from their competitors.
   E) has an important influence on the market price of the good or service being produced.

   Answer: B
   Topic: Perfect competition, definition
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: WM

10) A monopoly occurs when
   A) each of many firms produces a product that is slightly different from that of the other firms.
   B) one firm sells a good that has no close substitutes and a barrier blocks entry for other firms.
   C) there are many firms producing the same product.
   D) a few firms control the market.
   E) one firm is larger than the many other firms that make an identical product.

   Answer: B
   Topic: Monopoly, definition
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: WM

11) In which market structure does one firm sell a good or service with no close substitutes and there is a barrier blocking the entry of new firms?
   A) only monopoly
   B) only oligopoly
   C) perfect competition
   D) monopolistic competition
   E) either monopoly or oligopoly

   Answer: A
   Topic: Monopoly, definition
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: PH
12) When one firm sells a good or service that has no close substitutes and a barrier blocks the entry of new firms, what type of market is this?
A) perfect competition
B) only monopoly
C) oligopoly
D) only monopolistic competition
E) either monopoly or monopolistic competition

Answer: B
Topic: Monopoly, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: JC

13) ____ a large number of firms competing by making similar but slightly different products.
A) Monopoly requires
B) Perfect competition requires
C) Monopolistic competition requires
D) Oligopoly requires
E) Both perfect competition and monopolistic competition require

Answer: C
Topic: Monopolistic competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: JC

14) A market is classified as monopolistically competitive when
A) there is a barrier that blocks entry by other firms.
B) a small number of firms compete.
C) many firms produce the same product.
D) many firms produce a slightly differentiated product.
E) there is one firm that sells a good or service with no close substitutes.

Answer: D
Topic: Monopolistic competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: WM
15) In which market structure is there a large number of firms producing slightly differentiated products?
   A) monopoly
   B) oligopoly
   C) only perfect competition
   D) only monopolistic competition
   E) either perfect competition or monopolistic competition

Answer: D

Topic: Monopolistic competition, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: PH

16) A market is classified as an oligopoly when
   A) a few firms compete.
   B) many firms produce a slightly differentiated product.
   C) no matter how many firms are in the market, a barrier blocks entry by other new firms.
   D) many firms produce the same product.
   E) only one firm sells a product with no close substitutes.

Answer: A

Topic: Oligopoly, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: WM

17) In which market structure are there a small number of firms competing?
   A) only monopoly
   B) only oligopoly
   C) perfect competition
   D) monopolistic competition
   E) either monopoly or oligopoly

Answer: B

Topic: Oligopoly, definition
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: PH
18) A market is ____ when a small number of firms compete.
   A) a monopoly
   B) perfectly competitive
   C) monopolistically competitive
   D) an oligopoly
   E) either monopolistically competitive or an oligopoly

   Answer: D
   Topic: Oligopoly, definition
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: JC

19) The firm’s over-riding objective is to
   A) earn a normal profit.
   B) maximize normal profit.
   C) maximize economic profit.
   D) maximize total revenue.
   E) avoid an economic loss.

   Answer: C
   Topic: Firm’s goal
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: WM

20) Economic profit equals the firm’s total revenue minus the
   A) opportunity costs of production.
   B) fixed costs of production.
   C) variable costs of production.
   D) normal profit.
   E) economic loss.

   Answer: A
   Topic: Firm’s goal
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: JC
21) Normal profit is defined as
   A) the same thing as economic profit.
   B) the return to entrepreneurship.
   C) total revenue minus the total opportunity cost of production.
   D) the point of profit when total revenue is maximized.
   E) part of the firm's total revenue.

   Answer: B
   Topic: Normal profit
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: WM

22) A perfectly competitive firm can
   A) sell all of its output at the prevailing market price.
   B) sell at a higher price to customers willing to pay more.
   C) raise its price in order to increase its total revenue.
   D) sell additional output only by lowering its price.
   E) usually not sell all the output it produces, but still "over-produces" because there are some periods when it can sell the extra output at very profitable prices.

   Answer: A
   Topic: Price takers
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA

23) In central Florida during the spring, strawberry growers are price takers. The reason these growers are price takers is because there are ____ strawberry growers in this area.
   A) many
   B) more than one or two but not many
   C) one or two
   D) no
   E) Both answer C and answer D are correct.

   Answer: A
   Topic: Price takers
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: JC
24) In a perfectly competitive market, one farmer’s barley is
   A) completely different from another farmer’s barley.
   B) a perfect substitute for another farmer’s barley.
   C) a monopolized product in that farmer’s local market.
   D) a monopolized product in the national market.
   E) slightly different from another farmer’s barley.
   
   Answer: B
   Topic: Price takers
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: JC

25) The price charged by a perfectly competitive firm is
   A) the same as the market price.
   B) different than the price charged by competing firms.
   C) lower the more the firm produces.
   D) higher the more the firm produces.
   E) indeterminate.
   
   Answer: A
   Topic: Price takers
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA

26) For a perfectly competitive firm, the price of its good is equal to the firm’s marginal revenue because
   A) information about price changes is hard to come by for small sellers.
   B) price and marginal revenue are the same economic concepts.
   C) individual perfectly competitive firms cannot influence the market price by changing their output.
   D) the firm’s total revenue cannot be changed by anything the firms can do.
   E) there are only a small number of firms in the market.

   Answer: C
   Topic: Price takers
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA
27) Cynthia is an Oklahoma wheat farmer. The demand for her wheat is
   A) perfectly inelastic.
   B) inelastic but not perfectly inelastic.
   C) elastic but not perfectly elastic.
   D) perfectly elastic.
   E) unit elastic.

   Answer: D
   Topic: Demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: JC

28) Because perfectly competitive firms are price takers, each firm faces a demand that is
   A) perfectly inelastic.
   B) perfectly elastic.
   C) highly inelastic but never is it perfectly inelastic.
   D) unit elastic.
   E) highly elastic but never is it perfectly elastic.

   Answer: B
   Topic: Demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: WM

29) For the perfectly competitive broccoli producers in California, the market demand curve for broccoli is
   A) a horizontal line.
   B) downward sloping.
   C) nonexistent.
   D) upward sloping.
   E) the same as the demand curve each firm faces.

   Answer: B
   Topic: Demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: JC
30) The market demand curve in a perfectly competitive market is ____ and the demand curve for a perfectly competitive firm’s output is ____.
   A) downward sloping; downward sloping
   B) downward sloping; horizontal
   C) horizontal; downward sloping
   D) horizontal; horizontal
   E) downward sloping; upward sloping

Answer: B

Topic: Demand
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: SA

31) Elsie is a perfectly competitive dairy farmer. If the market price of milk falls to $1.20 a gallon from $1.40 a gallon, Elsie
   A) can sell as much milk as she wants at $1.20 a gallon.
   B) will have to charge some customers $1.40 a gallon to stay in business.
   C) will produce the same amount of milk at both prices.
   D) can sell more at the lower price because the quantity demanded is higher at lower prices.
   E) will be able to charge her initial customers $1.40 a gallon.

Answer: A

Topic: Demand
Skill: Level 3: Using models
Objective: Checkpoint 13.1
Author: SA

32) For a perfectly competitive palm tree nursery in South Carolina, the total revenue curve is
   A) downward sloping.
   B) a horizontal line.
   C) upward sloping.
   D) U-shaped.
   E) undefined because the firm is perfectly competitive.

Answer: C

Topic: Total revenue
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: JC
33) Marginal revenue is
   A) the change in total revenue from producing one additional unit of output.
   B) another name for total revenue.
   C) the change in total cost from producing an additional unit of output.
   D) the economic profit from producing an additional unit of output.
   E) less than price for a perfectly competitive firm.

Answer: A

Topic: Marginal revenue
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: PH

34) A firm’s marginal revenue is
   A) the change in total revenue that results from a one-unit increase in the quantity sold.
   B) total revenue minus total cost.
   C) the change in total revenue minus the change in total cost.
   D) the change in total revenue that results from an increase in the demand for the good or service.
   E) less than the market price for a perfectly competitive firm.

Answer: A

Topic: Marginal revenue
Skill: Level 1: Definition
Objective: Checkpoint 13.1
Author: JC

35) For a perfectly competitive firm, marginal revenue is
   A) less than the price.
   B) greater than the price.
   C) equal to the price.
   D) equal to the change in profit from selling one more unit.
   E) undefined because the firm’s demand curve is horizontal.

Answer: C

Topic: Marginal revenue
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: WM
36) For a perfectly competitive firm, the market price of a good is
   A) a given which the firm cannot change.
   B) determined by the firm in order to maximize its profit.
   C) equal to the firm's marginal revenue.
   D) Answer A and answer B are correct.
   E) Answer A and answer C are correct.
   Answer: E
   Topic: Marginal revenue
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA

37) In the short run, a perfectly competitive firm must decide
   A) the price to charge for its product, and the level of output that will maximize its economic profits or minimize its economic losses.
   B) only the level of output that will maximize its economic profits or minimize its economic losses because the price is determined in the market.
   C) only the price to charge for its product that will maximize its economic profits or minimize its economic losses because the quantity is determined in the market.
   D) whether or not it should advertise.
   E) neither its price nor the quantity it will produce because both are determined in the market.
   Answer: B
   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: PH

38) In a perfectly competitive industry, when a firm is producing so that its total revenue equals its total cost, the firm is
   A) earning an economic profit.
   B) incurring an economic loss.
   C) earning zero economic profits, that is, earning a normal profit.
   D) definitely not maximizing its profit.
   E) None of the above answers is correct because the relationship between total revenue and total cost has nothing to do with the firm's profit or loss.
   Answer: C
   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: PH
39) A perfectly competitive firm will maximize profits when the
   A) difference between total revenue and total cost is maximized.
   B) competition fails to make a profit and shuts down.
   C) firm can get a price higher than the market price.
   D) firm is able to earn a normal profit.
   E) difference between marginal revenue and marginal cost is maximized.

   Answer: A
   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA

40) For a syrup producer in central Vermont, profit is maximized at the level of output for
    which total
   A) revenue exceeds total cost by the largest amount.
   B) revenue exceeds total cost by the smallest amount.
   C) revenue is maximized.
   D) cost is minimized.
   E) revenue equals total cost.

   Answer: A
   Topic: Profit maximization
   Skill: Level 3: Using models
   Objective: Checkpoint 13.1
   Author: JC

41) A firm maximizes its profit by producing the amount of output such that
   A) marginal revenue equals marginal cost.
   B) marginal revenue exceeds marginal cost by some amount.
   C) marginal revenue is maximized.
   D) marginal cost is minimized.
   E) marginal revenue exceeds marginal cost by the maximum amount possible.

   Answer: A
   Topic: Profit maximization
   Skill: Level 1: Definition
   Objective: Checkpoint 13.1
   Author: JC
42) A perfectly competitive firm will maximize profits when the
   A) firm’s total revenue is equal to total cost.
   B) firm’s marginal revenue is equal to the price.
   C) firm’s marginal revenue is equal to its marginal cost.
   D) price exceeds the firm’s marginal cost.
   E) firm’s marginal revenue exceeds its marginal cost by the maximum amount possible.
   Answer: C

   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: SA

43) As a perfectly competitive wheat farmer’s output increases, the farmer’s
   A) total revenue increases, but so does total cost, so that if output is increased enough, the
      farmer suffers an economic loss.
   B) total revenue decreases and total cost increases, both thereby decreasing the farmer’s
      profit.
   C) total revenue does not change but total cost increases, thereby decreasing the farmer’s
      profit.
   D) marginal revenue increases, but so does marginal cost so that the farmer’s profit
      increases.
   E) total profit always increases.
   Answer: A

   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: WM

44) Shama is producing candles in a perfectly competitive market. When she produces 500
    candles, her total cost is $250. If she produces one additional candle, her total cost increases
    to $260. In order to maximize her profit, she should produce the additional candle
    A) if the market price for a candle is $12.
    B) only if the market price exceeds $260 for a candle.
    C) only if the market price exceeds $250 for a candle.
    D) if the market price for a candle exceeds $0.50.
    E) if her price exceeds her average total cost.
    Answer: A

   Topic: Profit maximization
   Skill: Level 3: Using models
   Objective: Checkpoint 13.1
   Author: SA
45) Jennifer’s Bakery Shop produces baked goods in a perfectly competitive market. If Jennifer decides to produce her 100th batch of cookies, the marginal cost is $120. She can sell this batch of cookies at a market price of $110. To maximize her profit, Jennifer should

A) not produce this additional batch.
B) produce this batch of cookies because they will help lower her average fixed cost.
C) charge $120 for this batch.
D) shut down.
E) produce this batch of cookies because their MR exceeds their MC.

Answer: A

Topic: Profit maximization
Skill: Level 3: Using models
Objective: Checkpoint 13.1
Author: SA

46) Mark owns a cattle ranch near Hugo, Oklahoma. Mark is currently producing beef at an output level where marginal revenue exceeds marginal cost. In order to maximize his profit, Mark should

A) not change his output.
B) decrease his output.
C) increase his output.
D) shut down his ranch.
E) probably change his output, but more information is needed to determine if he should increase, decrease, or not change it.

Answer: C

Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: JC
47) During the winter, theme parks in Orlando close earlier than in the summer. The reason the theme parks close early during the winter is because during that season the marginal revenue from staying open later is ____ the marginal cost.

A) greater than  
B) less than  
C) equal to  
D) zero compared to  
E) not comparable to

Answer: B

Topic: Profit maximization  
Skill: Level 3: Using models  
Objective: Checkpoint 13.1  
Author: JC
48) The above figure illustrates a perfectly competitive firm. Curve A represents the
A) MR curve.
B) ATC curve.
C) MC curve.
D) AVC curve.
E) AFC curve.
Answer: A
Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: MR

49) The above figure illustrates a perfectly competitive firm. Curve B represents the
A) MR curve.
B) ATC curve.
C) MC curve.
D) AVC curve.
E) AFC curve.
Answer: C
Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: MR
50) The above figure illustrates a perfectly competitive firm. Curve C represents the
   A) MR curve.
   B) ATC curve.
   C) MC curve.
   D) market demand curve.
   E) AFC curve.

Answer: B

Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: MR
51) The above figure illustrates a perfectly competitive firm. If the market price is $40 a unit, to maximize its profit (or minimize its loss) the firm should

A) shut down.
B) produce more than 10 and less than 30 units.
C) produce 30 units.
D) produce more than 30 units and less than 40 units.
E) produce 40 units.

Answer: E

Topic: Profit maximization
Skill: Level 3: Using models
Objective: Checkpoint 13.1
Author: SA
52) The above figure illustrates a perfectly competitive firm. If the market price is $10 a unit, to maximize its profit (or minimize its loss) the firm should
A) shut down.
B) produce between 10 and less than 30 units.
C) produce 30 units.
D) produce more than 30 units and less than 40 units.
E) produce 40 units.
Answer: A
Topic: Shut down
Skill: Level 3: Using models
Objective: Checkpoint 13.1
Author: SA

53) If a struggling perfectly competitive furniture store in Detroit shuts down, it incurs an economic loss equal to its
A) marginal cost.
B) total fixed cost.
C) total variable cost.
D) average variable cost.
E) average total cost.
Answer: B
Topic: Shut down
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: JC

54) A perfectly competitive firm will shutdown when the price is just below the minimum point on the
A) average fixed cost curve.
B) average total cost curve.
C) marginal cost curve.
D) average variable cost curve.
E) marginal revenue curve.
Answer: D
Topic: Shut down
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: JC
55) If the market price is $50 for a unit of a good produced in a perfectly competitive market and the firm’s minimum average variable cost is $52, then to maximize its profit (or minimize its loss) the firm should
   A) definitely produce the unit.
   B) shut down.
   C) not produce the unit but remain open.
   D) not produce the unit. Whether the firm should shut down or remain open cannot be determined without more information.
   E) produce the unit only if the price exceeds the average fixed cost.

Answer: B

Topic: Shut down
Skill: Level 3: Using models
Objective: Checkpoint 13.1
Author: SA

56) Under what conditions would a perfectly competitive cotton farmer who is incurring an economic loss temporarily stay in business?
   A) if the total revenue exceeds the total fixed cost
   B) if the total revenue exceeds the total variable cost
   C) if the total revenue is positive
   D) if the total revenue is increasing
   E) if the marginal revenue exceeds the price.

Answer: B

Topic: Shut down
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: JC

57) The rutabaga market is perfectly competitive and the price of a ton of rutabagas rises. As a result, Rudy, a rutabaga farmer, will
   A) decrease his output of rutabagas.
   B) not change his output of rutabagas because Rudy’s firm is a price taker.
   C) increase his output of rutabagas.
   D) at first decrease and then increase his output of rutabagas.
   E) probably change his output of rutabagas, but more information is needed about the change in the marginal revenue of a ton of rutabagas.

Answer: C

Topic: Firm’s short-run supply curve
Skill: Level 2: Using definitions
Objective: Checkpoint 13.1
Author: WM
58) A perfectly competitive firm's short-run supply curve is
   A) horizontal at the market price.
   B) its total cost curve above the $AVC$.
   C) its marginal cost curve below the marginal revenue curve.
   D) its marginal cost curve above the $AVC$ curve.
   E) its marginal revenue curve below the $ATC$ curve.

   Answer: D
   
   Topic: Firm's short-run supply curve
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.1
   Author: WM

13.2 Output, Price, and Profit in the Short Run

1) The market supply in the short run for the perfectly competitive industry is
   A) the same as each producer's supply.
   B) the sum of the supply schedules of all firms.
   C) divided up according to each firm's selling price.
   D) set at the maximum price a buyer will pay for one unit.
   E) equal to the average of each firm's supply schedule.

   Answer: B
   
   Topic: Market supply
   Skill: Level 1: Definition
   Objective: Checkpoint 13.2
   Author: WM

2) In the short run, a perfectly competitive firm ____ earn an economic profit and ____ incur an economic loss.
   A) might; will never
   B) will never; might
   C) might; might
   D) will never; will never
   E) will definitely; will never

   Answer: C
   
   Topic: Short-run equilibrium
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.2
   Author: SA
3) In the short run, a perfectly competitive firm
   A) can earn only a normal profit.
   B) can possibly make an economic profit or possibly incur an economic loss.
   C) produces the level of output that sets the average total cost equal to the market price.
   D) can vary all its inputs.
   E) can change only its fixed inputs.

   Answer: B
   Topic: Short-run equilibrium
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.2
   Author: SA

4) If a perfectly competitive firm finds that the price exceeds its ATC, then the firm
   A) will raise its price to increase its economic profit.
   B) will lower its price to increase its economic profit.
   C) is earning an economic profit.
   D) is incurring an economic loss.
   E) is earning only a normal profit.

   Answer: C
   Topic: Economic profit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.2
   Author: WM

5) For a perfectly competitive sugar producer in Haiti, a short-run economic profit will occur if the price of each ton of sugar sold is
   A) greater than the average total cost of producing sugar.
   B) equal to the average total cost of producing sugar.
   C) less than the average total cost of producing sugar.
   D) rising as more sugar is sold.
   E) greater than the marginal revenue of each ton of sugar.

   Answer: A
   Topic: Economic profit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.2
   Author: JC
6) If a perfectly competitive firm’s average total cost is less than the price, then the firm
   A) incurs an economic loss.
   B) earns an economic profit.
   C) earns a normal profit.
   D) earns either a normal profit or an economic profit depending on whether the marginal
      revenue is equal to or greater than the price.
   E) None of the above answers is correct because the relationship between the price and
      average total cost has nothing to do with the firm’s profit.

Answer: B
   Topic: Economic profit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.2
   Author: SA

7) If the market price is $50 per unit for a good produced in a perfectly competitive market
   and the firm’s average total cost is $52, then the firm
   A) has an economic loss of $2 per unit.
   B) has an economic profit of $2 per unit.
   C) has a normal profit.
   D) has a total economic loss of $52.
   E) More information is needed to determine the firm’s economic profit or loss per unit.

Answer: A
   Topic: Economic profit
   Skill: Level 3: Using models
   Objective: Checkpoint 13.2
   Author: SA

8) Peter’s Pencils is a perfectly competitive company producing pencils. Suppose Peter is
   producing 1,000 pencils an hour. If the total cost of 1,000 pencils is $500, the market price
   per pencil is $2, and the marginal cost is $2, then Peter
   A) has an economic profit because marginal revenue is equal to marginal cost at this
      output level.
   B) should decrease his output to increase his profit.
   C) is maximizing his profit and is earning an economic profit.
   D) should increase his output to increase his profit.
   E) is not maximizing his profit but is earning a normal profit anyway.

Answer: C
   Topic: Normal profit
   Skill: Level 3: Using models
   Objective: Checkpoint 13.2
   Author: SA
9) For a perfectly competitive syrup producer whose average total cost curve does not change, an economic profit could turn into an economic loss if the
   A) market demand for syrup decreases.
   B) marginal cost curve shifts downward.
   C) market demand for syrup does not change.
   D) market demand for syrup increases.
   E) price of syrup rises.

   Answer: A
   Topic: Economic loss
   Skill: Level 3: Using models
   Objective: Checkpoint 13.2
   Author: JC

10) For a perfectly competitive rancher in Wyoming, if the price does not change, an economic profit could turn into an economic loss if the
    A) average total cost curve shifts downward.
    B) average total cost curve does not change.
    C) average total cost curve shifts upward.
    D) marginal cost curve shifts downward.
    E) average fixed cost decreases.

    Answer: C
    Topic: Economic loss
    Skill: Level 3: Using models
    Objective: Checkpoint 13.2
    Author: JC
11) Computer memory chips are produced on wafers, each wafer having many separate chips that are separated and sold. The above table shows costs for a perfectly competitive producer of computer memory chips. If the market price of a wafer is $2,400 dollars, how many wafers will the firm produce?

A) 0  
B) 4 or 5  
C) 3 or 4  
D) 1 or 2  
E) 6  

Answer: B  
Topic: Profit maximization  
Skill: Level 3: Using models  
Objective: Checkpoint 13.2  
Author: PH

12) Computer memory chips are produced on wafers, each wafer having many separate chips that are separated and sold. The above table shows costs for a perfectly competitive producer of computer memory chips. If the market price of a wafer is $2,400 dollars, the firm is

A) earning a normal profit.  
B) earning an economic profit of $12,000 an hour.  
C) incurring an economic loss of $2,800 an hour.  
D) incurring an economic loss of $2,000 an hour.  
E) earning an economic profit of $2,400 an hour.  

Answer: D  
Topic: Economic loss  
Skill: Level 3: Using models  
Objective: Checkpoint 13.2  
Author: PH

<table>
<thead>
<tr>
<th>Quantity (wafers per hour)</th>
<th>Average variable cost (dollars)</th>
<th>Average total cost (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>0</td>
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<tr>
<td>1</td>
<td>1900</td>
<td>7900</td>
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<tr>
<td>2</td>
<td>1400</td>
<td>4400</td>
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<td>1400</td>
<td>2900</td>
</tr>
<tr>
<td>5</td>
<td>1600</td>
<td>2800</td>
</tr>
<tr>
<td>6</td>
<td>2000</td>
<td>3000</td>
</tr>
</tbody>
</table>
13) Computer memory chips are produced on wafers, each wafer having many separate chips that are separated and sold. The above table shows costs for a perfectly competitive producer of computer memory chips. This firm will produce as long as the market price of a wafer is above
   A) $1,300.
   B) $1,400.
   C) $7,900.
   D) $2,800.
   E) $9,800.

Answer: A

Topic: Shut down
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: PH
14) The above figure shows a perfectly competitive firm. If the market price is $15, the firm
   A) is incurring an economic loss.
   B) is earning an economic profit.
   C) is earning a normal profit.
   D) will immediately shut down.
   E) might shut down but more information is needed about the AVC.

Answer: B

Topic: Economic profit

Skill: Level 3: Using models

Objective: Checkpoint 13.2

Author: MR
15) The above figure shows a perfectly competitive firm. If the market price is $10, the firm
   A) is incurring an economic loss.
   B) is earning an economic profit.
   C) is earning a normal profit.
   D) will immediately shut down.
   E) might shut down but more information is needed about the $AVC$.

   Answer: C  
   Topic: Normal profit  
   Skill: Level 3: Using models  
   Objective: Checkpoint 13.2  
   Author: MR

16) The above figure shows a perfectly competitive firm. If the market price is $5, the firm
   A) might shut down but more information is needed about the $AVC$.
   B) is earning an economic profit.
   C) is earning a normal profit.
   D) will immediately shut down.
   E) will not shut down.

   Answer: A  
   Topic: Economic loss  
   Skill: Level 3: Using models  
   Objective: Checkpoint 13.2  
   Author: SA
17) The above figure shows a perfectly competitive firm. If the market price is $5 per unit, the firm

A) will definitely shut down to minimize its losses.
B) will stay open to produce and will earn a normal profit.
C) will stay open to produce and will incur an economic loss.
D) will stay open to produce and will earn an economic profit.
E) might shut down but more information is needed about the fixed cost.

Answer: A

Topic: Shut down
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: PH
18) The above figure shows a perfectly competitive firm. If the market price is $15 per unit, the firm

   A) will definitely shut down to minimize its losses.
   B) will stay open to produce and will earn a normal profit.
   C) will stay open to produce and will incur an economic loss.
   D) will stay open to produce and will earn an economic profit.
   E) might shut down but more information is needed about the fixed cost.

Answer: C

Topic: Economic loss
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: PH

19) The above figure shows a perfectly competitive firm. If the market price is $20 per unit, the firm

   A) will definitely shut down to minimize its losses.
   B) will stay open to produce and will earn a normal profit.
   C) will stay open to produce and will incur an economic loss.
   D) will stay open to produce and will earn an economic profit.
   E) might shut down but more information is needed about the fixed cost.

Answer: B

Topic: Normal profit
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: MR

20) The above figure shows a perfectly competitive firm. If the market price is more than $20 per unit, the firm

   A) will definitely shut down to minimize its losses.
   B) will stay open to produce and will earn a normal profit.
   C) will stay open to produce and will incur an economic loss.
   D) will stay open to produce and will earn an economic profit.
   E) might shut down but more information is needed about the fixed cost.

Answer: D

Topic: Economic loss
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: PH
21) The figure above shows a perfectly competitive firm. If the market price is $40 per unit, then the firm produces ____ units and has an economic profit that is ____.

A) more than 45; more than $400
B) 40; more than $400
C) 40; less than $400
D) 30; equal to zero because the firm earns a normal profit
E) 30; more than $250

Answer: B

Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: SA
22) The figure above shows a perfectly competitive firm. If the market price is $20 per unit, then the firm produces ____ units and has an economic profit that is ____.
   A) more than 30; more than $100
   B) 30; more than $100
   C) 20; less than $400
   D) 0; zero because the firm earns a normal profit
   E) 30; zero because the firm earns a normal profit

Answer: E

Topic: Normal profit
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: SA
23) Bill owns a lawn-care company in Windermere, Florida, whose cost curves are illustrated in the above figure. The market equilibrium price in this perfectly competitive market equals $32 per lawn mowed. At this price, how many lawns will Bill mow per week?

A) more than 10 and less than 30
B) 30
C) 40
D) 50
E) 0

Answer: C

Topic: Profit maximization
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: JC
24) Bill owns a lawn-care company in Windermere, Florida, whose cost curves are illustrated in the above figure. The market equilibrium price in this perfectly competitive market equals $32 per lawn mowed. Bill’s average total cost curve is \( ATC \), so his total cost of production equals

A) $0 because Bill shuts down.
B) more than $0 and less than $1,200 per week.
C) more than $1,200 and less than $1,400 per week.
D) more than $1,400 per week and less than $1,800 per week.
E) more than $1,800 per week.

Answer: B

Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: JC

25) Bill owns a lawn-care company in Windermere, Florida, whose cost curves are illustrated in the above figure. The market equilibrium price in this perfectly competitive market equals $32 per lawn mowed. If Bill’s average total cost curve is \( ATC \), his total economic equals ___.

A) loss; $800 per week
B) profit; $1,280 per week
C) profit; $480 per week
D) loss; $1,280 per week
E) profit; $32 per week

Answer: C

Topic: Economic profit
Skill: Level 3: Using models
Objective: Checkpoint 13.2
Author: JC
13.3 Output, Price, and Profit in the Long Run

1) When new firms enter the perfectly competitive Miami bagel market, the market
   A) supply curve shifts leftward.
   B) supply curve does not change.
   C) demand curve shifts rightward.
   D) supply curve shifts rightward.
   E) demand curve shifts leftward.

   Answer: D
   Topic: Entry
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: JC

2) Alice, Bud, and Celia can produce rubber bands in a perfectly competitive market. If they
   enter the market, the minimum average total cost for a bundle of rubber bands, for the three
   of them is $2, $3, and $4, respectively. If the market price is $2.10 per bundle, then
   A) all three of them will enter the market.
   B) only Alice will enter the market.
   C) Alice and Bud will enter the market.
   D) Bud and Celia will enter the market.
   E) Alice and Celia will enter the market.

   Answer: B
   Topic: Long-run equilibrium, entry
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: SA
3) Suppose a perfectly competitive market is in long-run equilibrium and then there is a permanent increase in the demand for that product. The new long-run equilibrium will have

A) fewer firms in the market.
B) more firms in the market.
C) the same number of firms in the market.
D) probably a different number of firms, but it is not possible to determine if there will be more or fewer firms.
E) a permanent decrease in supply.

Answer: B

Topic: Long-run equilibrium, entry
Skill: Level 3: Using models
Objective: Checkpoint 13.3
Author: SA

4) When firms in a perfectly competitive market are earning an economic profit, in the long run

A) no new firms will enter the market.
B) new firms will enter the market.
C) firms will exit the market.
D) the long-run average cost curve shifts downward.
E) the initial firms continue to earn an economic profit.

Answer: B

Topic: Long-run equilibrium, entry
Skill: Level 2: Using definitions
Objective: Checkpoint 13.3
Author: JC

5) The hog market is perfectly competitive, with thousands of hog farmers. In the 1990s, new farmers entered the hog market, driving the price of pork down. Initially, entry ____ the economic profit of the initial hog farmers and in the long run the initial hog farmers ____.

A) increased; earned an even greater economic profit than initially
B) decreased; earned a normal profit
C) increased; earned a normal profit
D) decreased; incurred an economic loss
E) increased; earned an economic profit

Answer: B

Topic: Long-run equilibrium, entry
Skill: Level 2: Using definitions
Objective: Checkpoint 13.3
Author: JC
6) The example of personal computers in the United States in the 1980s and early 1990s exemplifies the
   A) exit of firms when prices fall.
   B) entry of firms when a firm has a positive economic profit.
   C) exit of firms when new firms enter a market.
   D) entry of firms whenever normal profits are greater than zero.
   E) exit of firms when prices rise.
   Answer: B

   Topic: Eye on the U.S. economy, entry in personal computers, exit in farm machines
   Skill: Level 3: Using models
   Objective: Checkpoint 13.3
   Author: WM

7) When firms in a perfectly competitive market incur economic losses, exit by some firms means the market supply will
   A) increase.
   B) decrease.
   C) not change.
   D) become vertical.
   E) become the same as the individual producers' supplies.
   Answer: B

   Topic: Exit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: JC

8) In the long run, existing firms exit a perfectly competitive market
   A) only if economic profits are zero.
   B) if they earn a positive economic profit.
   C) if normal profits are greater than zero.
   D) only if they incur an economic loss.
   E) if they either earn only a normal profit or if they incur an economic loss.
   Answer: D

   Topic: Long-run equilibrium, exit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: WM
9) In the long run, perfectly competitive firms will exit the market if the price is
   A) higher than average variable cost.
   B) equal to average total cost.
   C) less than average total cost.
   D) equal to average fixed cost.
   E) equal to marginal revenue.

   Answer: C
   Topic: Long-run equilibrium, exit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: SA

10) A perfectly competitive market is in equilibrium and then demand decreases. The decrease in demand means the market price will ____ and eventually there will be ____.
    A) rise; entry by new firms
    B) fall; exit by existing firms
    C) fall; entry by new firms
    D) rise; exit by existing firms
    E) fall; neither entry nor exit because the market is perfectly competitive

   Answer: B
   Topic: Long-run equilibrium, exit
   Skill: Level 3: Using models
   Objective: Checkpoint 13.3
   Author: WM

11) Catfish farming is a perfectly competitive industry. Catfish farmers suffered tremendous economic losses in the late 1990s. As a result,
    A) eventually some new catfish farmers entered the market.
    B) eventually some catfish farmers exited the market.
    C) no catfish farmers entered or exited this market.
    D) the supply of catfish increased in 2000.
    E) new demanders entered the market after some firms had exited.

   Answer: B
   Topic: Long-run equilibrium, exit
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: JC
12) Keith is a perfectly competitive carnation grower. The market price is $2 per dozen carnations. Keith's average total cost to grow carnations is $2.50 per dozen. In the long run, Keith will
   A) raise his price to more than $2.50 per dozen carnations.
   B) raise his price to $2.50 per dozen carnations.
   C) exit the industry if the price and his costs do not change.
   D) incur an economic loss.
   E) continue to earn an economic profit.

Answer: C

Topic: Long-run equilibrium, exit
Skill: Level 3: Using models
Objective: Checkpoint 13.3
Author: SA

13) If concerns about mad-cow disease impose economic losses on the perfectly competitive cattle ranchers, exit by the ranchers combined with no further changes in the demand for beef will force the price of beef to
   A) decrease.
   B) not change.
   C) increase.
   D) fluctuate, with the trend being lower prices.
   E) probably change, but more information about the market supply of beef is needed to answer the question.

Answer: C

Topic: Long-run equilibrium, exit
Skill: Level 2: Using definitions
Objective: Checkpoint 13.3
Author: fC
14) In a perfectly competitive industry,
   i. entry by new firms shifts the market supply curve rightward.
   ii. exit by existing firms shifts the market supply curve leftward.
   iii. at all times existing firms make only a normal profit.
   A) ii and iii.
   B) ii only.
   C) i and iii.
   D) i and ii.
   E) i, ii, and iii.

Answer: D
Topic: Long-run equilibrium
Skill: Level 2: Using definitions
Objective: Checkpoint 13.3
Author: SA

15) If it does not shut down, a perfectly competitive firm produces where marginal cost is equal to the marginal revenue
   A) only in the short run.
   B) only in the long run.
   C) always to maximize its profit.
   D) only if it is not possible to produce where price equals average variable cost.
   E) only if it is not possible to produce where price is greater than average total cost.

Answer: C
Topic: Long-run equilibrium
Skill: Level 3: Using models
Objective: Checkpoint 13.3
Author: SA

16) In the long run, a perfectly competitive firm earns
   A) a positive economic profit.
   B) zero economic profit, that is, a normal profit.
   C) negative economic profit, that is, an economic loss.
   D) zero accounting profit.
   E) either a positive economic profit or a normal profit.

Answer: B
Topic: Long-run equilibrium
Skill: Level 1: Definition
Objective: Checkpoint 13.3
Author: JC
17) The cranberry market is perfectly competitive. Reports that consuming cranberries can lead to improved health result in a permanent increase in the demand for cranberries and an immediate upward jump in the price of cranberries. As time passes, the price of cranberries ____ and the initial firms' economic ____.

A) falls; profit will be eliminated
B) rises still higher; loss will be eliminated
C) rises still higher; profit will not change
D) falls; loss will be increased
E) falls; profit will not change

Answer: A

Topic: Long-run equilibrium
Skill: Level 2: Using definitions
Objective: Checkpoint 13.3
Author: JC

18) Suppose a perfectly competitive market is in long-run equilibrium with a price of $12. Then there is a permanent increase in demand. As a result, in the short run the market price ____ and in the long run the number of firms ____ and the price is ____ the price was in the short run.

A) rises; does not change; is equal to
B) rises; increases; higher than
C) rises; does not change; lower than
D) falls; decreases; is equal to
E) rises; increases; lower than

Answer: E

Topic: External economies
Skill: Level 3: Using models
Objective: Checkpoint 13.3
Author: SA
19) If the technology associated with producing fiber-optic cable continues to advance, over time the cost of producing fiber-optic cable will
   A) decrease, firms that use the new technology will earn an economic profit, and in the long run new firms will enter the market.
   B) decrease, firms that use the new technology will incur an economic loss, and in the long run some firms will exit the industry.
   C) increase, firms that use the new technology will earn an economic profit, and in the long run new firms will enter the market.
   D) increase, firms that use the new technology will incur an economic loss, and in the long run some firms will exit the industry.
   E) decrease, firms that do not use the new technology will earn an economic profit, and in the long run new firms will enter the market.

   Answer: A
   Topic: Technological change
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: JC

20) Technology reduces the average cost of production, so in the long run
   i. perfectly competitive firms produce at a lower average cost.
   ii. the market price of the good falls.
   iii. firms with older plants either exit the market or adopt the new technology.

   A) i only.
   B) i and ii.
   C) iii only.
   D) i and iii.
   E) i, ii, and iii.

   Answer: E
   Topic: Technological change
   Skill: Level 2: Using definitions
   Objective: Checkpoint 13.3
   Author: SA
13.4 Integrative Questions

1) Consider a short-run equilibrium in a perfectly competitive market. Suppose that the firms' average total cost and marginal cost schedules differ. In the short run,

A) all firms in the market must be able to earn an economic profit.
B) all firms produce equal amounts of output.
C) some firms might incur an economic loss, but still produce output.
D) some firms might earn an economic profit and, as a result, shut down.
E) all firms in the market must be able to earn either an economic profit or a normal profit.

Answer: C

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD
2) The above figure shows three possible average total cost curves. If all firms in a perfectly competitive industry each have an average total cost curve identical to $ATC_0$, each produces 20 units, and the market price of the good is $16 per unit, then

A) the firms earn an economic profit of $8 per unit.
B) firms will enter the industry and the number of firms increases.
C) the firms' $ATC$ curves will eventually shift to become the same as $ATC_1$.
D) firms will exit the industry and the number of firms decreases.
E) Both answer A and answer B are correct.

Answer: D

Topic: Integrative
Skill: Level 4: Applying models
Objective: Integrative
Author: CD
3) The above figure shows three possible average total cost curves. If all firms in a perfectly competitive industry each have an average total cost curve identical to $ATC_2$, each produces 40 units, and the market price of the good is $20 per unit, then
   A) the firms incur an economic loss of $12 per unit.
   B) firms will enter the industry and the number of firms increases.
   C) the firms’ $ATC$ curves will eventually shift to become the same as $ATC_1$.
   D) firms will exit the industry and the number of firms decreases.
   E) Both answer A and answer D are correct.

Answer: B

Topic: Integrative
Skill: Level 4: Applying models
Objective: Integrative
Author: CD

4) The above figure shows three possible average total cost curves. If all firms in a perfectly competitive industry each have an average total cost curve identical to $ATC_1$, each produce 30 units, and the market price of the good is $16 per unit, then the firms
   A) earn a normal profit and firms neither enter nor exit the industry.
   B) earn only a normal profit and so some firms exit the industry.
   C) incur an economic loss and so some firms exit the industry.
   D) incur an economic loss and so new firms enter the industry.
   E) earn an economic profit and new firms enter the industry.

Answer: A

Topic: Integrative
Skill: Level 4: Applying models
Objective: Integrative
Author: CD
5) The above figure shows three possible average total cost curves. If all firms in a perfectly competitive industry each have an average total cost curve identical to $ATC_1$, each produce 30 units, and the market price of the good is $16 per unit, then the firms

A) earn a normal profit and new firms enter the market.
B) earn a normal profit and no firms enter or exit the market.
C) earn a normal profit and some firms exit the market.
D) incur an economic loss and some firms exit the market.
E) earn an economic profit and new firms enter the market.

Answer: B

6) If firms in a perfectly competitive industry are earning an economic profit and new firms enter the industry, then

A) consumer surplus decreases.
B) the existing firms' economic profit decreases.
C) there must be external benefits to consumption of the good.
D) the new firms must incur an economic loss.
E) Both answer A and answer B are correct.

Answer: B

7) Which of the following are necessary for an unregulated perfectly competitive market to allocate resources efficiently?

i) Firms must produce at a point on their marginal cost curves.
ii) There can be no external costs or external benefits.

A) i only
B) ii only
C) both i and ii
D) neither i nor ii
E) ii definitely and i only if the price is less than the marginal cost.

Answer: B
8) Suppose that each of 8,000 firms in a perfectly competitive industry produces 1,000 units of a good and maximizes profits when the price of the good is $10. If there is a permanent increase in demand, in the short run each firm produces ____ 1,000 units and in the long run the number of firms is ____ 8,000.

A) more than; more than
B) less than; more than
C) less than; less than
D) more than; less than
E) exactly; more than

Answer: A

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD

9) Suppose that each of 10,000 perfectly competitive firm in an industry produces 1,000 units of a good and earns an economic profit when the price of the good is $10. In the long run, definitely

A) each firm increases its production above 1,000 units.
B) the number of firms is more than 10,000.
C) consumer surplus decreases.
D) producer surplus increases.
E) the number of firms is less than 10,000.

Answer: B

Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD