## Principles of Microeconomics, 10e (Case/Fair/Oster)

## Chapter 8 Short-Run Costs and Output Decisions

### 8.1 Costs in the Short Run

## 1 Multiple Choice

1) In the short run
A) a fixed factor of production does NOT impose limits on existing firms.
B) all firms must bear some costs regardless of their output.
C) new firms can enter an industry.
D) existing firms can exit an industry.

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
2) Fixed costs
A) do NOT exist in the long run.
B) depend on a firm's level of output.
C) are zero if a firm produces no output.
D) are total costs minus average variable costs.

Answer: A
Diff: 1
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Skill: Fact
3) Which statement is NOT true? Variable costs are
A) equal to total costs in the long run.
B) zero if output is zero.
C) equal to the product of average variable cost and the output level.
D) constant as output increases.

Answer: D
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
4) Economists usually assume that $\qquad$ is a fixed input in the $\qquad$ run.
A) labor; short
B) capital; short
C) labor; long
D) capital; long

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
5) Economists usually assume that labor is $\qquad$ input in the $\qquad$ run.
A) a fixed; short
B) a fixed; long
C) a variable; short
D) part fixed and part variable; long

Answer: C
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
6) The formula for total fixed cost is
A) $T F C=T C+T V C$.
B) $T F C=T V C-T C$.
C) $T F C=T C / T V C$.
D) $T F C=T C-T V C$.

Answer: D
Diff: 1
Topic: Costs in the Short Run Skill: Fact
7) Total cost is calculated as
A) TFC+TVC.
B) ATCxP.
C) the sum of all the firm's implicit costs.

Answer: A
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
8) The Lawn Ranger, a landscaping company, has total costs of $\$ 5,000$ and total variable costs of $\$ 1,000$. The Lawn Ranger's total fixed costs are
A) $\$ 0$.
B) $\$ 4,000$.
C) $\$ 6,000$.
D) indeterminate because the firm's output level is unknown.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
9) The Lawn Ranger, a landscaping company, has total costs of $\$ 7,000$ and total fixed costs of $\$ 5,000$. The Lawn Ranger's total variable costs are
A) $\$ 2,000$.
B) $\$ 3,000$.
C) $\$ 5,000$.
D) indeterminate because the firm's output level is unknown.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
10) A dairy company, Farley Farm, has total costs of $\$ 10,000$ and total variable costs of $\$ 3,000$.

Farley Farm's total fixed costs are
A) $\$ 0$.
B) $\$ 7,000$.
C) $\$ 13,000$.
D) indeterminate because the firm's output level is not known.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
11) Wilbur's Widgets, a widget company, produces 100 widgets. Its average fixed cost is $\$ 6$ and its total variable cost is $\$ 400$. The total cost of producing 100 widgets is $\qquad$ .
A) $\$ 306$.
B) $\$ 400$.

C) $\$ 600$.
D) $\$ 1,000$.

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
12) Amy spends $\$ 6,000$ on remodeling a storefront that she then opens as a take-out deli. After opening her deli her business is terrible and she needs an additional $\$ 2,000$ to keep the deli open. Which of the following is TRUE?
A) The $\$ 6,000$ Amy spent on remodeling represents a part of the total variable cost of her business.
B) The $\$ 6,000$ Amy spent on remodeling represents a sunk cost of her business.
C) The $\$ 2,000$ Amy needs to keep the deli open represents her marginal costs of production.
D) The $\$ 2,000$ Amy needs to keep the deli open represents her total fixed costs.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
13) Dana spends $\$ 10,000$ on remodeling a storefront that she then opens as a shoe store. Her business has not been very successful, and she needs an additional $\$ 3,000$ to keep the shoe store open. Which of the following is TRUE?
A) The $\$ 10,000$ Dana spent on remodeling represents a part of the total variable cost of her business.
B) The $\$ 3,000$ represents her marginal costs of production.
C) The $\$ 10,000$ Dana spent on remodeling is a fixed cost of her business.
D) The $\$ 3,000$ Dana needs to keep the deli open represents her total fixed costs.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
14) Firms can $\qquad$ their $\qquad$ costs in the short run.
A) change; fixed
B) not change; fixed
C) change; overhead
D) not change; variable

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact

15) The formula for average fixed costs is

C) $q / T F C$.
D) $\Delta q / \Delta T F C$.

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
16) Average fixed costs
A) are the costs associated with producing an additional unit of output.
B) provide a per unit measure of costs.
C) fall as output rises.
D) are constant.

Answer: C
Diff: 1
Topic: Costs in the Short Run
Skill: Fact

Refer to the information provided in Figure 8.1 below to answer the question that follows.


Figure 8.1
17) Refer to Figure 8.1 above. The total fixed costs for Cyndy's Floral Arrangements are $\$ 1,000$. If Cyndy's Floral Arrangements produces 200 silk flower arrangements, the average fixed costs are
A) $\$ 0.20$.
B) $\$ 5$.
C) $\$ 20$.
D) $\$ 50$.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic

## Refer to the information provided in Figure 8.2 below to answer the question that follows.



Figure 8.2
18) Refer to Figure 8.2 above. The total fixed costs for The Barber Shop are $\$ 3,000$. If The Barber Shop produces 300 hair cuts, the average fixed costs are
A) \$.20.
B) $\$ 5$.
C) $\$ 10$.

D) $\$ 100$.

Answer: C WMMMH, VUFOE, WHebly, COITl
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
19) As output decreases, average fixed costs
A) decrease.
B) initially decrease and then increase.
C) remain constant.
D) increase.

Answer: D
Diff: 1
Topic: Costs in the Short Run Skill: Fact
20) Both Kate and Kyle own saltwater taffy factories. Kate's factory has low fixed costs and high variable costs. Kyle's factory has high fixed costs and low variable costs. Currently, each factory is producing 1,000 boxes of taffy at the same total cost. Complete the following statement with the correct answer. If each produces
A) less, their costs will be equal.
B) more, their costs will be equal.
C) more, the costs of Kate's factory will exceed those of Kyle's factory.
D) less, the costs of Kate's factory will exceed those of Kyle's factory.

Answer: C
Diff: 3
Topic: Costs in the Short Run
Skill: Conceptual
21) Short-run costs that do NOT depend on the level of output are
A) total fixed costs only.
B) total variable costs only.
C) total costs only.
D) both total variable costs and total costs.

Answer: A
Diff: 1
Topic: Costs in the Short Run Skill: Fact
22) Which statement is NOT true regarding the total variable cost curve?
A) The total variable cost curve increases as output increases.
B) The total variable cost curve shows the variable costs of production given current factor prices.
C) The total variable cost curve starts at the origin.
D) The total variable cost curve is a horizontal line.

Answer: D
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
23) A point on a total variable cost curve shows the $\qquad$ variable cost a firm will bear to produce a certain output.
A) highest
B) lowest
C) change in
D) average

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
24) $\qquad$ is(are) most likely a variable cost for a firm.
A) The interest payments made on loans
B) The franchiser's fee that a restaurant must pay to the national restaurant chain
C) The monthly rent on office space that it leased for a year
D) The payroll taxes that are paid on employee wages

Answer: D
Diff: 3
Topic: Costs in the Short Run
Skill: Conceptual
25) $\qquad$ are likely a fixed cost of a firm.
A) Wages paid to employees
B) The payments for supplies
C) Lease payments for office space
D) Travel expenses to meet with clients

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
Refer to the information provided in Table 8.1 below to answer the questions that follow.

## Table 8.1

| Produce | Using Techniques | Units of Variable K | Inputs L |
| :---: | :---: | :---: | :---: |
| 1 unit of output$\begin{aligned} & \mathrm{A} \\ & \mathrm{~B} \end{aligned} \mathrm{~B} \boldsymbol{\mathrm { H }} \mathrm{H}={ }_{4}^{8}$ |  |  | $12$ |
| 2 units of output | A | 14 | 12 |
|  | B | 8 | 20 |
| 3 units of output | A | 16 | 12 |
|  | B | 12 | 22 |

26) Refer to Table 8.1. Assuming the price of capital $(K)$ is $\$ 10$ per unit and the price of labor ( $L$ ) is $\$ 5$ per unit, what production technique should this firm use to produce 2 units of output?
A) production technique A
B) production technique $B$
C) The firm is indifferent between production technique $A$ and production technique $B$.
D) It is impossible to determine if the firm should select production technique A or B because total fixed costs are not given.
Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
27) Refer to Table 8.1. Assuming the price of capital $(K)$ is $\$ 10$ per unit and the price of labor ( $L$ ) is $\$ 5$ per unit, the lowest long-run total cost of producing one unit of output is
A) $\$ 16$.
B) $\$ 100$.
C) $\$ 120$.
D) $\$ 220$

Answer: B
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
28) Refer to Table 8.1. Assume that the relevant time period is the short run. Assuming the price of capital $(K)$ is $\$ 10$ per unit and the price of labor $(L)$ is $\$ 5$ per unit, this firm's total cost of producing one unit of output is
A) $\$ 100$.
B) $\$ 120$.
C) $\$ 220$.
D) indeterminate from this information.

Answer: D
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
29) Refer to Table 8.1. Assume that the relevant time period is the short run. Assuming the price of labor $(L)$ is $\$ 5$ per unit and the price of capital $(K)$ is $\$ 10$ per unit, the average total cost of producing two unit of output is
A) $\$ 20$.
B) $\$ 40$.
C) $\$ 90$.
D) $\$ 100$.

Answer: C
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
30) Refer to Table 8.1. Assuming the price of capital $(K)$ is $\$ 10$ per unit and the price of labor ( $L$ ) is $\$ 5$ per unit, the marginal cost of producing the third unit of output is
A) $\$ 30$.
B) $\$ 40$.
C) $\$ 50$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
31) Refer to Table 8.1. Assuming the price of capital $(K)$ is $\$ 10$ per unit and the price of labor ( $L$ ) is $\$ 5$ per unit, the firm will use production technique $\qquad$ to produce $\qquad$ of output.
A) A; all three units
B) B; all three units
C) B; the first two units of output and production technique $A$ to produce the third unit
D) A; the first unit and production technique B to produce the second and third units

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
32) Marginal cost is the
A) increase in total cost resulting from producing one more unit of output.
B) average cost of production divided by output.
C) increase in $A V C$ resulting from producing one more unit of output.
D) equivalent of average total cost.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Definition
33) A firm will begin to experience diminishing returns at the output where marginal
A) cost increases.
B) cost decreases./.
C) product increases. V. Vfoe, Wee bly.com
D) both B and C

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Definition
34) Diminishing marginal returns implies
A) decreasing average variable costs.
B) decreasing marginal costs.
C) increasing marginal costs.
D) decreasing average fixed costs.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Definition
35) Marginal cost is $\qquad$ average variable cost when $\qquad$ -
A) equal to; average total cost is minimized
B) less than; total cost is maximized
C) greater than; average fixed cost is minimized
D) equal to; average variable cost is minimized.

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
36) In a short run production process a(n) $\qquad$ marginal product of labor explains why
marginal cost is positive and $\qquad$ .
A) zero; falls
B) constant; rises
C) increasing; does not change
D) diminishing; rises

Answer: D
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
37) In the short run when the marginal product of labor $\qquad$ the marginal cost of an additional unit of output $\square$ $\square 1$
A) rises; rises
B) falls; falls
C) rises; falls
D) falls; doesn't change

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Fact
38) Total variable costs $\qquad$ with increasing output.
A) always increase
B) always decrease
C) initially increase and then decrease
D) initially decrease and then increase

Answer: A
Diff: 1
Topic: Costs in the Short Run Skill: Fact
39) One formula for $M C$ is
A) $T V C / q$.
B) $q / T V C$.
C) $\triangle T V C / q$.
D) $\Delta T V C / \Delta q$.

Answer: D
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
40) One formula for $A V C$ is
A) $q / T V C$.
B) $T V C / q$.
C) $\Delta T V C / \Delta q$.
D) $\Delta q / \Delta T V C$.

Answer: B
Diff: 1
Topic: Costs in the Short Run Skill: Fact
41) As output increases, in the short run,
A) the difference between average total cost and average variable cost decreases.
B) the difference between total cost and average variable cost decreases.
C) marginal cost eventually increases.
D) All of the above are correct. Fo , WMe Eb|W, COll
nswer: A

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
42) Because marginal cost is always $\qquad$ in the short run, total variable cost always
$\qquad$ when output increases.
A) positive; increases
B) positive; decreases
C) negative; increases
D) negative; decreases

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
43) In the short run marginal cost is positive and decreasing at output levels where total variable cost is $\qquad$ at $a(n)$ $\qquad$ rate.
A) increasing; increasing
B) increasing; decreasing
C) decreasing; increasing
D) decreasing; decreasing

Answer: B
Diff: 3
Topic: Costs in the Short Run
Skill: Conceptual
44) In the short run marginal cost is positive and increasing at output levels where total variable cost is $\qquad$ at $a(n)$ $\qquad$ rate.
A) increasing; increasing
B) increasing; decreasing
C) decreasing; increasing
D) decreasing; decreasing

Answer: A
Diff: 3
Topic: Costs in the Short Run
Skill: Conceptual

## Refer to the information provided in Figure 8.3 below to answer the questions that follow.



Figure 8.3
45) Refer to Figure 8.3. The marginal cost of the 10th basketball is
A) $\$ 2$.
B) $\$ 3$.
C) $\$ 3.05$.
D) $\$ 5.80$.

Answer: A
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
46) Refer to Figure 8.3. If total fixed costs are $\$ 50$, then average total cost of producing 10 basketballs is
A) $\$ 3$.
B) $\$ 5$.
C) $\$ 8$.
D) $\$ 80$.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
47) Refer to Figure 8.3. The marginal cost of the ninth basketball is
A) less than $\$ 2$.
B) $\$ 2$.
C) $\$ 3$.
D) greater than $\$ 3$.

Answer: A
Diff: 3
Topic: Costs in the Short Run
Skill: Analytic
48) Labor is the only variable input for Elliot's dog-walking service. His labor costs are $\$ 300$ a day and his service walks 25 dogs per day. His labor costs increase to $\$ 315.50$ a day to walk 26 dogs per day. The marginal cost of walking that 26th dog is
A) $\$ 15.50$
B) $\$ 19.50$.
C) $\$ 29.50$.
D) indeterminate from the information given.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic

Refer to the information provided in Table 8.2 below to answer the questions that follow.
Table 8.2

| Number of <br> Earnings | TVC | MC | AVC | TFC | TC | AFC | ATC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 |  |  |  |  | 100 |  |  |
| 1 |  | 50 |  |  |  |  |  |
| 2 |  |  | 46.67 |  |  |  | 95 |
| 3 |  |  |  | 300 |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 5 | 270 |  |  |  |  |  |  |

49) Refer to Table 8.2. If Sherry produces zero earrings, her total fixed costs are
A) $\$ 0$.
B) $\$ 50$.
C) $\$ 100$.
D) indeterminate from this information.

Answer: C
Diff: 2
Topic: Costs in the Short Run Skill: Analytic

50) Refer to Table 8.2. If Sherry produces one pair of earrings, her total variable costs are
A) $\$ 50$.
B) $\$ 100$.
C) $\$ 150$.
D) indeterminate from this information.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
51) Refer to Table 8.2. If Sherry produces two pairs of earrings, her marginal cost is
A) $\$ 40$.
B) $\$ 45$.
C) $\$ 72.50$.
D) $\$ 122.50$.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
52) Refer to Table 8.2. If Sherry produces three pairs of earrings, her total variable costs are
A) $\$ 26.67$.
B) $\$ 140$.
C) $\$ 175$.
D) $\$ 225$.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
53) Refer to Table 8.2. If Sherry produces five pairs of earrings, her total costs are
A) $\$ 320$.
B) $\$ 360$.
C) $\$ 370$.
D) $\$ 400$.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
54) Refer to Table 8.2. If Sherry produces four pairs of earrings, her average fixed costs are
A) $\$ 4$.
B) $\$ 20$.
C) $\$ 25$.
D) $\$ 100$.

Answer: C


Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
55) Refer to Table 8.2. Assume that Sherry's Earrings is producing in a perfectly competitive market and the market price for earrings is $\$ 60$. To maximize profits Sherry should produce
$\qquad$ pairs of earrings.
A) two
B) three
C) four
D) five
Answer: C
Diff: 2
Topic: Costs in the Short Run Skill: Analytic

Refer to the information provided in Table 8.3 below to answer the questions that follow.
Table 8.3

| Number of <br> Earrings | TVA MC AVS IFC TC AFC ATC |  |  |
| :---: | :---: | :---: | :---: |
| 0 |  |  |  |
| 1 | 20 |  |  |
| 2 |  | 10 | 30 |
| 3 |  |  | 110 |
| 4 |  | 20 |  |
| 5 |  |  | 180 |

56) Refer to Table 8.3. What is the total cost of producing zero units of output?
A) $\$ 0$
B) $\$ 30$
C) $\$ 60$
D) indeterminate from the given information

Answer: A
Diff: 2
Topic: Costs in the Short Run Skill: Conceptual
57) Refer to Table 8.3. The marginal cost of the fourth unit is $\qquad$ and the average total cost of the fourth unit is $\qquad$ WTOE,WMEDW,COTH
A) $\$ 10 ; \$ 30$
B) $\$ 20 ; \$ 45$
C) $\$ 30 ; \$ 35$
D) indeterminate from the given information

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
58) Refer to Table 8.3. From the information in the given table,
A) the firm is in the long run.
B) the firm experiences diminishing returns to its variable input.
C) the marginal cost curve intersects the average total cost curve between 3 and 4 units of output.
D) the difference between total cost and total variable cost decreases as output increases.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
59) Refer to Table 8.3. If the firm is in a perfectly competitive industry with a market price of $\$ 30$ per unit, the firm will produce $\qquad$ units and earn a profit of $\qquad$ .
A) three; $\$ 20$
B) four; $\$ 20$
C) four; - $\$ 20$
D) five; $\$ 30$

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
60) If we know average total cost and the amount of output, then we can always calculate total cost by $\qquad$ average total cost $\qquad$ the amount of output.
A) adding; and
B) subtracting; from
C) multiplying; by
D) dividing; by

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
61) If the marginal cost curve is above the average variable cost curve, then
A) average variable cost is increasing.
B) average variable cost is decreasing.
C) average variable cost is constant.
D) marginal cost is decreasing.

Answer: A
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
62) Marginal cost intersects $\qquad$ at its minimum.
A) total cost
B) average total cost
C) average fixed cost
D) (B) and (C) are both correct.

Answer: B
Diff: 2
Topic: Costs in the Short Run Skill: Fact
63) If the marginal cost curve is below the average variable cost curve, then
A) average variable cost is increasing.
B) average variable cost is decreasing.
C) average variable cost is constant.
D) marginal cost is increasing.

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
64) If the average variable cost curve is above the marginal cost curve, then
A) marginal costs must be decreasing.
B) marginal costs must be increasing.
C) marginal costs can be either increasing or decreasing.
D) average variable costs must be increasing.

Answer: C
Diff: 3
Topic: Costs in the Short Run
Skill: Fact
65) The marginal cost curve intersects the average variable cost curve at the $\qquad$ value of the average variable cost curve.
A) maximum
B) minimum
C) zero
D) average

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Conceptual
66) Twenty-five students in a class take a test for which the average grade is 75 . Then a twentysixth student enters the class, takes the same test, and scores 70. The test average grade calculated with 26 students will
A) rise above 75 .
B) fall below 75 .
C) change from 75 but the direction is unclear.
D) still equal 75 .

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Conceptual
67) If a firm's total costs are $\$ 75$ when it produces 10 units of output and $\$ 80$ when it produces 11 units of output, then the marginal cost of producing the 11th unit is
A) $\$ 1$.
B) $\$ 5$.
C) $\$ 8.09$.
D) $\$ 10$.

Answer: B
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
68) If a firm's total costs are $\$ 100$ when 10 units of output are produced and $\$ 105$ when 11 units of output are produced, the marginal cost of the 11th unit is
A) $\$ 1$.
B) $\$ 3$.
C) $\$ 5$.
D) $\$ 9.36$.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
69) If the average variable cost of the fifth hat is $\$ 30$, then the total variable cost of five hats is
A) $\$ 6$.
B) $\$ 150$.
C) $\$ 1800$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic

## Refer to the information provided in Figure 8.4 below to answer the questions that follow.



Figure 8.4
70) Refer to Figure 8.4. Micro Oven's average fixed costs of producing two units of output are
A) $\$ 250$.
B) $\$ 425$.
C) $\$ 500$.
D) indeterminate from this information.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
71) Refer to Figure 8.4. If three microwave ovens are produced, Micro Oven's total variable costs are
A) $\$ 350$.
B) $\$ 500$.
C) $\$ 1000$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
72) Refer to Figure 8.4. If three microwave ovens are produced, average variable costs are
A) $\$ 166.67$.
B) $\$ 333.33$.
C) $\$ 500$.
D) $\$ 1,500$.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
73) Refer to Figure 8.4. The marginal cost of the third microwave oven is
A) $\$ 133.33$.
B) $\$ 150$.
C) $\$ 350$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
74) Refer to Figure 8.4. Up to point $A$ $\qquad$ costs are $\qquad$ .
A) marginal; decreasing
B) marginal; increasing
C) average variable; decreasing
D) average variable; increasing

Answer: C
Diff: 3
Topic: Costs in the Short Run
Skill: Analytic
75) Refer to Figure 8.4. After point $A$ $\qquad$ costs are $\qquad$ .
A) average total; increasing
B) marginal; decreasing
C) average variable; decreasing
D) average variable; increasing

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
76) Refer to Figure 8.4. Marginal costs will equal average variable costs at
A) two microwave ovens.
B) three microwave ovens.
C) six microwave ovens.
D) an indeterminate number of microwave ovens from this information.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
77) Refer to Figure 8.4. Micro Oven's average total costs are $\qquad$ if it produces six microwave ovens.
A) $\$ 33.33$
B) $\$ 83.33$
C) $\$ 116.67$
D) $\$ 200.00$

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
78) Refer to Figure 8.4. The marginal cost of the sixth microwave oven is
A) $\$ 83.33$.
B) $\$ 116.67$.
C) $\$ 200$.
D) $\$ 1200$.

Answer: B
Diff: 3
Topic: Costs in the Short Run
Skill: Analytic
79) Refer to Figure 8.4. Average variable costs are minimized at an output level of
A) 2 .
B) 3 .
C) 6 .
D) an indeterminate number based on the available information.

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
80) Refer to Figure 8.4. 's average fixed costs are $\qquad$ if it produces six microwave ovens.
A) $\$ 33.33$
B) $\$ 83.33$
C) $\$ 116.67$
D) indeterminate from this information

Answer: B
Diff: 2
Topic: Costs in the Short Run Skill: Analytic
81) Refer to Figure 8.4. Micro Oven minimizes average total costs at $\qquad$ microwave ovens.
A) two
B) between three and five
C) $\operatorname{six}$
D) greater than six

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
82) Refer to Figure 8.4. The vertical distance $A B$ represents $\qquad$ costs.
A) total fixed
B) average fixed
C) marginal
D) average total

Answer: A
Diff: 2
Topic: Costs in the Short Run Skill: Analytic

Refer to the information provided in Figure 8.5 below to answer the questions that follow.


Figure 8.5
83) Refer to Figure 8.5. The total fixed costs for Ollie's Ovens are
A) $\$ 0$.
B) $\$ 250$.
C) $\$ 300$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
84) Refer to Figure 8.5. Average variable costs are $\qquad$ if Ollie's Ovens produces two ovens.
A) $\$ 100$
B) $\$ 200$
C) $\$ 225$
D) indeterminate from this information.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
85) Refer to Figure 8.5. Average variable costs are $\qquad$ if Ollie's Ovens produces three ovens.
A) $\$ 166.67$
B) $\$ 83.33$
C) $\$ 500$
D) $\$ 1,500$

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
86) Refer to Figure 8.5. The marginal cost of the third oven is
A) $\$ 50$.
B) $\$ 100$.
C) $\$ 150$.
D) indeterminate from this information.

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic

Refer to the information provided in Figure 8.5 below to answer the questions that follow.


Figure 8.5
87) Refer to Figure 8.5. The marginal cost is equal to average variable cost when $\qquad$ ovens are produced.
A) two
B) three
C) six
D) indeterminate from this information.

Answer: C
Diff: 2
Topic: Costs in the Short Run Skill: Analytic $\qquad$
88) Refer to Figure 8.5. The average total costs are minimized when $\qquad$ ovens are produced.
A) exactly six
B) more than six
C) less than six
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
89) Refer to Figure 8.5. The marginal cost of the sixth oven is
A) $\$ 50.00$.
B) $\$ 66.67$.
C) $\$ 108.33$.
D) indeterminate from this information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
90) A short run total cost schedule is a $\qquad$ cost schedule shifted upward by the amount of
$\qquad$ cost.
A) total fixed; marginal
B) marginal; total variable
C) total variable; total fixed
D) total variable; marginal

Answer: C
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
91) There are outputs for which $\qquad$ costs exceed $\qquad$ costs in the short run.
A) total fixed; total
B) average variable; average total
C) total variable; total
D) average total; average variable

Answer: D
Diff: 1
Topic: Costs in the Short Run
Skill: Conceptual
92) Total cost is
A) TFC -TVC.
B) $T F C / T V C$.

Answer: C
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
93) Total cost refers to
A) the full economic costs of production.
B) the sum of average fixed cost and average variable cost.
C) the fixed costs of production.
D) the explicit costs of production.

Answer: A
Diff: 1
Topic: Costs in the Short Run
Skill: Definition
94) ATC is
A) $T C / q$.
B) $q / T C$.
C) $A F C-A V C$.
D) $\Delta T C-\Delta q$.

Answer: A
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
95) Average total cost
A) measures the spread of overhead across output.
B) is the average cost of producing each unit of output.
C) is always increasing.
D) is the sum of fixed cost and average variable cost.

Answer: B
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
96) The Framing Gallery frames posters and has total fixed costs of $\$ 1,000$. The Framing Gallery is currently framing___ posters if its average variable cost is $\$ 20$ and its average total cost is \$30.
A) 5
B) 25
C) 100
D) an indeterminate number of

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
97) The average variable cost of producing 100 sundaes is $\$ 3$. At this level of output, average variable cost is minimized. Which of the following statements is TRUE?
A) Marginal cost of the 100th sundae is $\$ 300$.
B) Average total cost is minimized at an output greater than 100 sundaes.
C) Average fixed cost is minimized at an output less than 100 sundaes.
D) Total cost of producing 100 sundaes is $\$ 300$.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
98) Average variable and average total costs get closer together as output increases because
$\qquad$ as output increases.
A) diminishing returns set in
B) average fixed costs decrease
C) marginal costs decrease
D) total and total variable costs get closer together

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic

## Refer to the information provided in Figure 8.6 below to answer the questions that follow.

Cost curves for Outdoor Equipment

99) Refer to Figure 8.6. Curve 1 is Outdoor Equipment's $\qquad$ cost curve.
A) marginal
B) average variable
C) average total
D) average fixed

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
100) Refer to Figure 8.6. Outdoor Equipment's average total costs are minimized at the output level
A) where Curves 1 and 2 intersect.
B) where Curves 1 and 3 intersect.
C) between the intersections of Curves 1 and 2 and Curves 1 and 3 .
D) indeterminate with the given information.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
101) Refer to Figure 8.6. Curve 2 is Outdoor Equipment's $\qquad$ cost curve.
A) marginal
B) average variable
C) average total
D) average fixed

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
102) Refer to Figure 8.6. Curve 3 is Outdoor Equipment's $\qquad$ cost curve.
A) marginal
B) average variable
C) average total
D) average fixed

Answer: C
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
103) Refer to Figure 8.6. The vertical distance $A B$ is Outdoor Equipment's $\qquad$ cost.
A) marginal
B) average fixed

C) total fixed
D) total

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Definition
104) If marginal cost is below average total cost, average total cost will
A) be maximized.
B) decrease
C) increase.
D) remain constant.

Answer: B
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
105) If marginal cost equals average total cost, average total cost will
A) be maximized.
B) decrease.
C) increase.
D) be minimized.

Answer: D
Diff: 2
Topic: Costs in the Short Run
Skill: Analytic
106) The short-run average total cost curve eventually begins to increase at an increasing rate because of
A) diseconomies of scale phenomena.
B) a constraint that does not allow the firm to change its production technology.
C) diminishing returns phenomena.
D) increasing returns to scale to capital.

Answer: C
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
107) The law of diminishing marginal returns
$A$ ) results in average variable cost (AVC), average total cost (ATC), and marginal cost (MC) curves eventually increasing at an increasing rate.
B) results in $M C$ but not $A V C$ curves eventually increasing at an increasing rate.
C) causes average fixed costs to decline continuously as output increases.
D) causes the difference between average total cost and average variable cost to increase as output increases.
Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Definition
108) In the short run a firm using variable labor and fixed capital inputs achieves the efficient
(lowest cost) level of output at the minimum point on its $\qquad$ cost curve.
A) average total
B) total variable
C) average fixed
D) marginal

Answer: A
Diff: 2
Topic: Costs in the Short Run
Skill: Fact
109) A firm is producing output less than the output associated with the minimum point on the firm's short run average variable cost curve. At this level of output the firm uses its fixed capital input $\qquad$ and its variable labor input $\qquad$ -.
A) efficiently; efficiently
B) efficiently; inefficiently
C) inefficiently; efficiently
D) inefficiently; inefficiently

Answer: D
Diff: 3
Topic: Costs in the Short Run
Skill: Conceptual
110) Consider an output beyond the minimum point of a firm's short run average total cost curve. At this level of output the firm can use its $\qquad$ input at a lower average cost but only by using its $\qquad$ input at a higher average cost.
A) fixed capital; variable labor
B) variable labor; fixed capital
C) variable capital; fixed labor
D) fixed labor; variable capital

Answer: A
Diff: 3
Topic: Costs in the Short Run
Skill: Analytic
111) Related to the Economics in Practice on page 166: When considering expanding its student body a college should
A) compare the marginal cost of educating an additional student to the tuition that student pays.
B) compare the average total cost of educating an additional student to the tuition that student pays.
C) definitely expand because education is very important and should be made availableto as many people as possible.
D) only consider doing so if they have sufficient housing.

Answer: A
Diff: 2


Topic: Costs in the Short Run: Economics in Practice
Skill: Conceptual
112) Related to the Economics in Practice on page 166: In higher education
A) the average total cost of educating students equals the marginal cost of educating an additional student.
B) the average total cost of educating students exceeds the marginal cost of educating an additional student.
C) the average total cost of educating students is less than the marginal cost of educating an additional student.
D) the total fixed cost of educating students is less than the marginal cost of educating an additional student.
Answer: B
Diff: 2
Topic: Costs in the Short Run: Economics in Practice
Skill: Fact

## 2 True/False

1) Average fixed costs rise continuously as quantity of output rises.

Answer: FALSE
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
2) The increase in total cost that results from producing one more unit of output is the marginal cost.
Answer: TRUE
Diff: 2
Topic: Costs in the Short Run Skill: Definition
3) The best combination of inputs at one level of production may not be best at other levels.

Answer: TRUE
Diff: 1
Topic: Costs in the Short Run Skill: Fact
4) If marginal cost is increasing, then average variable cost must be increasing simultaneously.

Answer: FALSE
Diff: 1
Topic: Costs in the Short Run
Skill: Fact
5) Average total cost is minimized at a higher level of output than average variable cost.

Answer: TRUE
Diff: 1
Topic: Costs in the Short Run Skill: Conceptual
6) When marginal cost is between average variable cost and average total cost, marginal cost is decreasing.
Answer: FALSE
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
7) Average total cost of producing 100 units of output is $\$ 5$. If the marginal cost of producing the 101st unit is $\$ 6$, then average total cost of 101 units is less than $\$ 5$.
Answer: FALSE
Diff: 2
Topic: Costs in the Short Run
Skill: Conceptual
8) Total variable cost divided by output is marginal cost.

Answer: FALSE
Diff: 1
Topic: Costs in the Short Run
Skill: Definition

### 8.2 Output Decisions: Revenues, Costs, and Profit Maximization

## 1 Multiple Choice

1) Marginal revenue (MR) is
A) $T R / q$
B) $\Delta T R / \Delta q$.
C) $P^{*} q$
D) $P / q$

Answer: B
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
2) The main decision for a profit maximizing perfectly competitive firm is NOT what $\qquad$ but what $\qquad$ -.
A) level of output to produce; price to charge
B) price to charge; level of output to produce
C) level of output to produce; total revenue to achieve
D) price to charge; total cost to achieve

Answer: B
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
3) If an individual perfectly competitive firm charges a price above the industry equilibrium price while competitors charge the equilibrium price, the firm will
A) sell all that it can produce and forgo no revenue.
B) sell all that it can produce and gain more revenue with the higher price.
C) sell part of what it can produce and forgo some revenue that it could have had.
D) not sell any of what it produces.

Answer: D
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
4) If an individual perfectly competitive firm charges a price below the industry equilibrium price while competitors charge the equilibrium price, the firm will
A) not sell any of what it produces.
B) sell part of what it produces but forgo no revenue.
C) sell all that it produces and forgo no revenue.
D) sell all that it produces but forgo revenue that it could have had.

Answer: D
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
5) Any firm's total revenue equals
A) $M R \times q$.
B) $P \times q$.
C) $P / q$.
D) $M R / q$.

Answer: B
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
6) The added revenue that a firm takes in when it increases output by one additional unit is
$\qquad$ revenue.
A) total
B) marginal
C) variable
D) fixed

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
7) Marginal revenue is the
A) ratio of total revenue to quantity.
B) difference between total revenue and total costs.
C) added revenue that a firm takes in when it increases output by one additional unit. D) additional profit the firm earns when it sells an additional unit of output.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
8) In perfect competition, a firm's marginal revenue curve
A) and the demand curve facing the firm are identical.
B) is always above the demand curve facing the firm.
C) is always below the demand curve facing the firm.
D) intersects the demand curve when marginal revenue is minimized.

Answer: A
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
9) In perfect competition, a firm's marginal revenue curve is
A) downward sloping.
B) upward sloping.
C) horizontal.
D) vertical.

Answer: C
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
10) The relationship between the price that a perfectly competitive firm can charge buyers and the firm's marginal revenue is that the price is $\qquad$ marginal revenue over all output.
A) above
B) below
C) equal to
D) sometimes above and sometimes below

Answer: C
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
11) Profit-maximizing firms want to maximize the difference between $\qquad$ revenue and
$\qquad$
A) total; marginal
B) total; total
C) marginal; marginal $H L H E$, WHP
D) marginal; average

Answer: B
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
12) Assume Dell Computer Company operates in a perfectly competitive market producing 5,000 computers per day. At this output level, price exceeds the firm's marginal and average variable costs. It follows that producing one more computer will cause this firm's
A) total cost to decrease.
B) profits to increase.
C) profits to decrease.
D) profits to remain unchanged.

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
13) Assume Dell Computer Company operates in a perfectly competitive market producing 5,000 computers per day. At this output level, price exceeds this firm's marginal and average variable costs. To maximize profits, Dell should
A) make no adjustments as they are already maximizing their profits.
B) increase their output.
C) decrease their output.
D) stop producing since it is earning a loss.

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
14) Assume Dell Computer Company operates in a perfectly competitive market producing 5,000 computers per day. At this output level, marginal cost exceeds this firm's price. Assuming price exceeds average variable cost, to maximize profits Dell should
A) make no adjustments as they are already maximizing their profits.
B) increase their output.
C) decrease their output.
D) stop producing since it is earning a loss.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
15) Assume Dell Computer Company operates in a perfectly competitive market producing 5,000 computers per day. At this output level, price equals this firm's marginal cost.
Assuming price exceeds average variable cost, to maximize profits Dell should
A) make no adjustments as they are already maximizing their profits.
B) increase their output.
C) decrease their output.
D) stop producing since it is earning a loss.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic

Refer to the information provided in Table 8.5 below to answer the following questions.

| Table 8.5 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Number of <br> Fruit Baskets | TFC | TVC | TC | MC |
| 0 | $\$ 50$ | $\$ 0$ | $\$ 50$ | -- |
| 1 | 50 | 10 | 60 | 10 |
| 2 | 50 | 15 | 65 | 5 |
| 3 | 50 | 21 | 71 | 6 |
| 4 | 50 | 31 | 81 | 10 |
| 5 | 50 | 46 | 96 | 15 |
| 6 | 50 | 68 | 118 | 22 |

16) Refer to Table 8.5. Assume that Exotic Fruit sells fruit baskets in a perfectly competitive market. The market price of a fruit basket is $\$ 22$. To maximize profits, Exotic Fruit should sell $\qquad$ fruit basket(s) and their profit is $\qquad$ .
A) three; $\$ 5$
B) four; $\$ 7$
C) five; $\$ 14$
D) six; $\$ 14$

Answer: D
Diff: 2


Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic

17) Refer to Table 8.5. Assume that Exotic Fruit sells fruit baskets in a perfectly competitive market. The market price of a fruit basket is $\$ 15$. To maximize profits, Exotic Fruit should sell $\qquad$ fruit basket(s) and their profit it $\qquad$ .
A) zero; \$0
B) two; -\$35
C) three; - $\$ 26$
D) five; -\$21

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
18) If a firm's demand curve is perfectly elastic, then at the profit maximizing level of output
A) $\mathrm{P}>M R>M C$.
B) $\mathrm{P}=M R=M C$.
C) $\mathrm{P}<M R<M C$.
D) $\mathrm{P}>0$ and $M R=0$.

Answer: B
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
19) If a profit maximizing firm is currently producing output where $M R=M C$, it should
A) increase output so that marginal revenue is less than marginal cost.
B) decrease output so that marginal revenue will be greater than marginal cost and the firm's profit will increase.
C) not change output because it is already maximizing profit.
D) exit the industry.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
20) If a firm is producing where $M R>M C$
A) the revenue gained by producing one more unit of output exceeds the cost incurred by doing so.
B) the revenue gained by producing one more unit of output equals the cost incurred by doing so.
C) the revenue gained by producing one more unit of output is less than the cost incurred by doing so.
D) the firm is already maximizing profits because revenue is being increased by more than costs.
Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
21) Joe's Butcher Shop is producing where $M R=M C$, Joe's Butcher Shop must be
A) earning a zero economic profit.
B) incurring a loss.
C) maximizing profits.
D) maximizing revenue but not maximizing profits.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
22) The profit-maximizing level for all firms, regardless of industry structure, is the output level where
A) $T R=M C$.
B) $\mathrm{P}=\mathrm{MC}$.
C) $A T C=P$.
D) $M C=M R$.

Answer: D
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact

Refer to the information provided in Figure 8.7 below to answer the question that follows.


Figure 8.7
23) Refer to Figure 8.7. If Buffy gives 17 perms per day, her daily profit is
A) $\$ 3$.
B) $\$ 51$.
C) $\$ 153$.
D) $\$ 204$.


Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
24) A firm in a perfectly competitive industry produces its profit-maximizing quantity, 40 units.

Industry price is $\$ 3$, total fixed costs are $\$ 45$, and total variable costs are $\$ 60$. The firm's economic profit is
A) $\$ 15$.
B) $\$ 30$.
C) $\$ 35$.
D) $\$ 60$.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
25) An individual wheat farmer produces wheat in a perfectly competitive market. An increase in the market demand for wheat will cause the farmer's marginal revenue to $\qquad$ and his profit maximizing level of output to $\qquad$ .
A) increase; increase
B) increase; decrease
C) decrease; increase
D) decrease; decrease

Answer: A
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
26) Corn is produced in a perfectly competitive market. The demand for ethanol decreases. This will cause the individual corn farmer's marginal revenue to $\qquad$ and their profit maximizing level of output to $\qquad$ .
A) increase; increase
B) increase; decrease
C) decrease; increase
D) decrease; decrease

Answer: D
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
27) Strawberries, a normal good, are produced in a perfectly competitive market. Average consumer incomes increase. This will cause the individual strawberry farmer's marginal revenue to $\qquad$ and their profit maximizing level of output to $\qquad$ .
A) increase; increase
B) increase; decrease
C) decrease; increase
D) decrease; decrease

## Answer: A

Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
28) A farmer producing bushels of soybeans in the perfectly competitive soybean industry is currently maximizing profits. If the market price of soybeans falls and the farmer adjusts output to the new price, he will produce $\qquad$ soybeans and make $\qquad$ profit.
A) fewer; the same
B) fewer; less
C) more; more
D) the same bushels of; the same

Answer: B
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual

## Refer to the information provided in Figure 8.8 below to answer the questions that follow.



Figure 8.8
29) Refer to Figure 8.8. A soybean farmer's profit-maximizing level of output is $\qquad$ units of output.
A) 200
B) 700
C) 1,000

D) 1,400
$\underbrace{\text { Diff }}_{\text {Answer.c }}$ WWW.yufoe.weebly.com
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
30) Refer to Figure 8.8. If this farmer is producing the profit-maximizing level of output, her profit is
A) $\$ 0$.
B) $\$ 2,800$.
C) $\$ 3,000$.
D) $\$ 12,000$.

## Answer: C

Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
31) Refer to Figure 8.8. What is the total cost of producing the profit maximizing level of output?
A) $\$ 9$.
B) $\$ 1,000$.
C) $\$ 5,600$.
D) $\$ 9,000$.

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
32) Refer to Figure 8.8. If the market price of soybeans falls to $\$ 8$, then to maximize profits this farmer should produce
A) 200 bushels of soybeans.
B) 700 bushels of soybeans.
C) 1,000 bushels of soybeans.
D) a level of output that is indeterminate from this information.

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
33) Refer to Figure 8.8. If this farmer produces the profit maximizing level of soybeans when the market price is $\$ 8$ per bushel, then her total revenue would be
A) $\$ 1,200$.
B) $\$ 2,800$.
C) $\$ 5,600$.
D) $\$ 8,400$.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
34) Refer to Figure 8.8. If this farmer produces the profit maximizing level of soybeans when the market price is $\$ 8$ per bushel, then her profit would be
A) $\$ 0$.
B) $\$ 2,800$.
C) $\$ 5,600$.
D) $\$ 8,000$.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic

Refer to the information provided in Figure 8.9 below to answer the questions that follow.


Figure 8.9
35) Refer to Figure 8.9. This farmer's profit-maximizing level of output is $\qquad$ units of output.
A) 100
B) 350
C) 500

D) 700
$\underset{\substack{\text { Answer: } \\ \text { Diff } 2}}{\text { WWW. Vufoe,weebly.com }}$
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
36) Refer to Figure 8.9. If this farmer is producing the profit maximizing level of output, her profit is
A) $\$ 0$.
B) $\$ 1,000$.
C) $\$ 2,000$.
D) $\$ 3,000$.

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
37) Refer to Figure 8.9. If the market price of hay falls to $\$ 18$, then to maximize profits this farmer should produce
A) 350 bales of hay.
B) 500 bales of hay.
C) 750 bales of hay.
D) a level of output that is indeterminate from this information.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
38) Refer to Figure 8.9. If this farmer produces the profit maximizing level of hay when the market price is $\$ 18$ per bale, her total revenue would be
A) $\$ 1,200$.
B) $\$ 2,800$.
C) $\$ 5,600$.
D) $\$ 6,300$.

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
39) Refer to Figure 8.9. If this farmer produces the profit maximizing quantity when the market price is $\$ 18$, her profit is
A) $\$ 0$.
B) $\$ 700$.
C) $\$ 2,000$.
D) indeterminate from this information.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
40) A perfectly competitive firm will earn positive economic profits in the range of output for which the firm's price is $\qquad$ its minimum average total cost.
A) below
B) above
C) equal to
D) below its marginal cost and

Answer: B
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
41) If a perfectly competitive firm's average total cost curve is above its demand schedule at every level of output, then the firm will earn $\qquad$ profits.
A) positive
B) breakeven
C) negative
D) zero

Answer: C
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
42) A perfectly competitive firm breaks even at the level of output where
A) $\mathrm{P}>$ ATC.
B) $\mathrm{P}<A T C$.
C) $\mathrm{P}=A T C$.
D) $\mathrm{P}=M C$.

Answer: C
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
43) If $\mathrm{P}=M C$ and $M C>A T C$, then a perfectly competitive firm will earn $\qquad$ profits.
A) positive
B) zero
C) negative
D) breakeven

Answer: A
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
44) If a perfectly competitive firm is currently producing where $\mathrm{P}=M C$ and $M C=A T C$, then the firm will earn $\qquad$ profits.
A) positive
B) zero
C) negative
D) above normal

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
45) If industry supply increases while the industry demand remains the same, then an individual firm in a perfectly competitive industry currently earning positive profits will see its profits
A) increase.
B) not change.
C) decrease.
D) impossible to determine

Answer: C
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
46) If an industry supply curve decreases while the industry demand curve remains the same, then an individual firm in a perfectly competitive industry currently earning losses will see its losses
A) increase.
B) not change.
C) decrease.
D) impossible to determine

Answer: C
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Analytic
47) Perfectly competitive firms
A) sell homogeneous products.
B) are price takers.
C) are small relative to the size of the market.
D) All of the above are correct.

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
48) The rising part of a perfectly competitive firm's $\qquad$ cost curve is the firm's short-run
$\qquad$ curve.
A) average total; supply
B) average variable; demand
C) average fixed; demand
D) marginal; supply

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
49) The law of supply holds for perfectly competitive firms assuming that each firm tries to
A) maximize profits.
B) minimize total costs.
C) maximize revenue.
D) minimize variable costs.

Answer: A
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact

Refer to the information provided in Figure 8.10 below to answer the question that follows.


Figure 8.10
50) Refer to Figure 8.10. Panel $\qquad$ represents the demand curve facing a perfectly competitive producer of wheat.
A) A
B) B
C) C
D) D

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Analytic
51) Jerry sells cherry sno-cones along the boardwalk in New Jersey. During the summer this is a perfectly competitive business, and Jerry faces a perfectly price elastic demand curve. If he wants to try to increase revenues, he should
A) raise the price of his sno-cones to make more per sale.
B) lower the price of his sno-cones to try to sell more.
C) keep the price the same but produce more to increase revenues.
D) do nothing since he can do nothing to increase revenue.

Answer: C
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
52) A firm in a perfectly competitive market has no control over price because
A) the government imposes price ceilings on the products produced in perfectly competitive markets.
B) any firm may freely enter into and/or exit from the market.
C) each firm's product perfectly substitutes for every other firm's product.
D) the market demand for products produced in perfectly competitive markets is perfectly price elastic.
Answer: C
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
53) The closest example of a perfectly competitive industry is
A) fast foods.
B) beer.
C) gasoline stations.
D) soybeans.

Answer: D
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual

## Refer to the information provided in Figure 7.13 below to answer the questions that follow.



Figure 7.13
54) Refer to the figure above. Assuming the wool market (industry) is perfectly competitive, each wool producer faces a(n) $\qquad$ demand curve starting at $\$ 3.00$ per pound.
A) downward sloping
B) upward sloping
C) vertical
D) horizontal

Answer: D
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
55) Refer to figure above. Assuming the coffee market (industry) is perfectly competitive, each coffee producer faces a(n) $\qquad$ demand curve starting at $\$ 4.00$ per pound.
A) downward sloping
B) upward sloping
C) vertical
D) horizontal

Answer: D
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
56) A market demand curve is
A) downward sloping.
B) upward sloping.
C) perfectly elastic.
D) perfectly inelastic.

Answer: A
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
57) If a firm in a perfectly competitive industry raises its price above the market price, its
A) total revenue will increase.
B) profit will increase.
C) sales will drop to zero.
D) demand curve will become downward sloping.

Answer: C
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
58) A firm facing a perfectly price elastic demand curve, ceteris paribus
A) can sell all it produces only by lowering its price below the market price.
B) can raise its price and not lose all its customers.
C) will sell the same amount regardless if it raises or lowers the price it charges.
D) will have zero quantity demanded if it raises its price above the market price.

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
59) It is difficult for a wool producer in a perfectly competitive wool industry to make excess profits because
A) wool producers are "price takers."
B) wool producers in the industry do not "differentiate" their products.
C) the demand curve facing each wool producer is perfectly elastic.
D) entry into the wool industry is free.

Answer: D
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Definition
60) If the wool industry is perfectly competitive, the market demand curve for wool is $\qquad$ and an individual wool producer's demand curve is $\qquad$ .
A) downward sloping; horizontal
B) horizontal; downward sloping
C) horizontal; horizontal
D) downward sloping; downward sloping

Answer: A
Diff: 3
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
61) Free entry implies that
A) a perfectly competitive firm can never earn a profit.
B) if an industry's existing firms make excessively high profits, new firms are likely to enter the industry.
C) the government regulates the number of firms it allows in an industry.
D) firms will always earn above normal profit, as new firms can enter the industry at any time they like.
Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
62) Economists do NOT consider the fast-food industry perfectly competitive because
A) the government strictly regulates entry and exit.
B) fast-food products are heterogeneous.
C) fast food firms face a large number of customers each relatively small.
D) there are a large number of fast-food firms.

Answer: B
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
63) Related to the Economics in Practice on page 170: Janice owns an ice cream shop. Monthly revenue is $\$ 12,000$. Her fixed cost of operation include rent, electricity, interest on a loan, etc. and come to $\$ 3,500$ per month. Her variable costs include wages for her workers and ice cream supplies which are $\$ 4,000$ per month. Janice is trying to decide whether to stay in business or return to her previous occupation as an elementary school teacher. Janice should return to teaching only if she earns more than $\qquad$ a month.
A) $\$ 4,500$
B) $\$ 8,000$
C) $\$ 8,500$
D) She should return to teaching regardless of her salary because education is the most important career anyone can have.
Answer: A
Diff: 2
Topic: Output Decisions: Economics in Practice
Skill: Analytic
64) Related to the Economics in Practice on page 170: You are the owner of an ice cream shop. You normally close at 8 pm , but are considering staying open an additional hour. You
A) should definitely stay open as your profits will increase as your sales increase.
B) should only stay open if the additional revenue you generate exceeds the average total cost of operation.
C) should only stay open if the additional revenue you generate exceeds the marginal cost of operating an additional hour.
D) work too hard -- don't stay open any later.

Answer: C
Diff: 2
Topic: Output Decisions: Economics in Practice
Skill: Conceptual

## 2 True/False

1) In perfectly competitive industries all firms supply a homogeneous product.

Answer: TRUE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Fact
2) A firm's demand curve in a perfectly competitive industry is price inelastic.

Answer: FALSE

## Diff: 1

Topic: Output Decisions: Revenues, Costs, and Profit Maximization

3) The total revenue curve for a perfectly competitive firm will be a straight line with positive slope.
Answer: TRUE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
4) The marginal revenue curve for a perfectly competitive firm will be downward sloping.

Answer: FALSE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
5) Marginal costs reflect changes in variable costs.

Answer: TRUE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Fact
6) The short run is a period of less than one year.

Answer: FALSE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Definition
7) The shut-down decision is a short-run decision.

Answer: TRUE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Definition
8) If demand in a perfectly competitive market decreases, then an individual firm in that industry will see its profits fall.
Answer: TRUE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
9) For a perfectly competitive firm, when $\mathrm{P}=\mathrm{MC}=\mathrm{ATC}$ the firm should reduce its output so as to increase its profits.
Answer: FALSE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Conceptual
10) Firms maximize their profits by producing the output level where MR=ATC.

Answer: FALSE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
11) Perfectly competitive firms minimize their losses by producing the output level where
$\mathrm{P}=\mathrm{MR}=\mathrm{AVC}$.
Answer: FALSE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
12) The upward sloping portion of the perfectly competitive firm's average variable cost curve is the firm's short run supply curve.
Answer: FALSE
Diff: 2
Topic: Output Decisions: Revenues, Costs, and Profit Maximization
Skill: Conceptual
13) Perfectly competitive firms sell heterogeneous products.

Answer: FALSE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Definition
14) Perfectly competitive firms are price takers.

Answer: TRUE
Diff: 1
Topic: Output Decisions: Revenues, Costs, and Profit Maximization Skill: Definition

