

3. Production, Cost, and the Perfect Competition Model

Starter Quiz ·

AP Microeconomics

Name: _____ Score: _____

1. In the **short run**, a firm has:
 - ☐ no inputs at all
 - ☐ at least one fixed input
 - ☐ no output
 - ☐ every input variable
2. Total cost equals fixed cost plus _____ cost.

3. A firm enjoys **economies of scale** when, as it grows:
 - ☐ fixed costs rise
 - ☐ long-run average cost rises
 - ☐ long-run average cost falls
 - ☐ output falls
4. Accounting profit equals:
 - ☐ total revenue — explicit costs
 - ☐ total revenue — all costs
 - ☐ total revenue — implicit costs
 - ☐ explicit costs — implicit costs
5. A firm maximises profit by producing the quantity where:
 - ☐ marginal revenue equals marginal cost
 - ☐ price equals total cost
 - ☐ total revenue is highest
 - ☐ average cost is highest
6. In the short run, a loss-making firm should keep producing as long as:
 - ☐ price is at least the average total cost
 - ☐ price is at least the average variable cost
 - ☐ price is above the fixed cost
 - ☐ it is making any loss at all

7. For a competitive firm, price equals average revenue and also equals _____ revenue.

8. A bakery makes 24 loaves with 2 workers and 33 loaves with 3 workers. What is the marginal product of the 3rd worker?

_____ loaves

9. Total cost is 160 at 10 units and 175 at 11 units. What is the marginal cost of the 11th unit?

10. Because the LRATC hugs the bottom of all the short-run curves, it is called their _____.

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Answers ·

AP Microeconomics

1. at least one fixed input

The short run has at least one fixed input; the long run has none.

2. variable

$TC = FC + VC$. Fixed costs stay put; variable costs rise with output.

3. long-run average cost falls

Economies of scale = a falling LRATC as the firm gets bigger.

4. total revenue — explicit costs

Accountants subtract only the explicit (paid-out) costs.

5. marginal revenue equals marginal cost

At $MR = MC$ profit can no longer improve – the profit-maximizing rule.

6. price is at least the average variable cost

If $P \geq AVC$, staying open loses less than shutting down (which loses all the fixed cost).

7. marginal

Because every unit sells at the same price, $P = AR = MR$.

8. 9 loaves

MP of the 3rd worker = $33 - 24 = 9$ loaves.

9. 15

$MC = \Delta TC / \Delta Q = (175 - 160) / 1 = 15$.

10. envelope

The LRATC envelope traces the lowest cost at each level of output.