

## 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

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 \_\_\_\_\_.

\_\_\_\_\_

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.