

What are Total, Average, and Marginal Costs?

Worksheet

Total Cost is the sum of fixed and variable expenses. Average Cost = $TC \div Q$ (cost per unit).

Marginal Cost = $\Delta TC \div \Delta Q$ (cost of the next unit). MC intersects AC at its minimum.

Questions

1. TC = \$200 at Q=10. What is AC?

- A) \$10
- B) \$20
- C) \$200
- D) \$2000

2. MC is lowest when...

- A) AC is highest
- B) AC is lowest
- C) TC stops rising
- D) revenue is maximum

3. From Q=4 to Q=5, TC rises from 80 to 92. MC for the 5th unit?

- A) \$10
- B) \$12
- C) \$15
- D) \$92

4. What is the relationship between Fixed Cost and AC?

- A) FC increases AC proportionally
- B) FC is constant so AC falls as Q rises
- C) FC has no effect on AC
- D) FC equals AC

5. A baker produces 100 cakes. Fixed costs = 500, variable costs = 3 per cake. Find TC, AC, MC for the 100th cake.

6. Output rises from 50 to 60 units. TC changes from 400 to 470. What is MC?

7. A firm's TC at 5 units is 100, at 6 units is 115. Compute AC and MC.

8. Define: What is Total Cost?

9. Define: What is Average Cost?

10. Define: What is Marginal Cost?

Answer Key

1. B) \$20 — $AC = TC/Q = 200/10 = \$20$ per unit.
2. C) TC stops rising — MC is the slope of TC. When MC rises but is still below AC, AC keeps falling (AC minimum is where $MC = AC$).
3. B) \$12 — $MC = \Delta TC / \Delta Q = (92 - 80) / (5 - 4) = 12/1 = \12 .
4. B) FC is constant so AC falls as Q rises — AC includes fixed cost spread over Q units. As Q rises, FC/Q shrinks → AC falls initially.
5. $TC = \text{Fixed} + \text{Variable} = 500 + (3 \times 100) = 500 + 300 = 800$ $AC = TC/Q = 800/100 = 8$ per cake
MC for 100th = additional cost $\approx \$3$ (the variable cost of one cake)
6. $\Delta TC = 470 - 400 = 70$ $\Delta Q = 60 - 50 = 10$ units $MC = 70/10 = 7$ per unit
7. AC at 6 units = $115/6 = 19.17$ per unit MC (6th unit) = $115 - 100 = 15$
8. The sum of all production expenses: $TC = \text{Fixed Cost} + \text{Variable Cost}$.
9. Cost per unit of output: $AC = TC / Q$.
10. The cost of producing one additional unit: $MC = \Delta TC / \Delta Q$.

Bounlu

All cards, step-by-step solutions and an AI tutor are in the Notek app.
Promy turns exam dates into automatic reminders.