

Calculus Applications in Commerce and Economics

Business Calculus · Practice Test · 16 Questions

1. What is the cost function expressed as if 'C' denotes total cost and 'x' quantity produced?

- A) $C = C(x)$
- B) $x = x(C)$
- C) $C + x = 0$
- D) $C - x = 1$

2. Which of the following is NOT typically included in fixed costs?

- A) Rent
- B) Insurance
- C) Material Costs
- D) Depreciation

3. What is the formula for total cost?

- A) Variable cost - Fixed cost
- B) Variable cost / Fixed cost
- C) Variable cost + Fixed cost
- D) Fixed cost - Variable cost

4. If the cost function is $C(x) = 5x + 10$, what is the fixed cost?

- A) 5
- B) 10
- C) $5x$
- D) 0

5. What does the demand function represent?

- A) Relationship between supply and price
- B) Relationship between demand and price
- C) Relationship between cost and quantity
- D) Relationship between profit and revenue

6. Revenue is calculated as:

- A) Selling Price + Quantity Sold
- B) Selling Price - Quantity Sold
- C) Selling Price * Quantity Sold
- D) Selling Price / Quantity Sold

7. Profit is the difference between which two functions?

- A) Cost and Demand
- B) Revenue and Demand
- C) Revenue and Cost
- D) Demand and Supply

8. What is the condition at the break-even point?

- A) Total Revenue > Total Cost
- B) Total Revenue < Total Cost
- C) Total Revenue = Total Cost
- D) Profit is maximized

9. At the break-even point, what is the profit?

- A) Positive
- B) Negative
- C) Zero
- D) Infinite

10. What is average cost (AC) defined as?

- A) Total cost / Total items produced
- B) Total revenue / Total items sold
- C) Marginal cost / Total items produced
- D) Variable cost / Total items produced

11. Marginal cost (MC) is defined as the rate of change of what?

- A) Revenue with respect to quantity
- B) Profit with respect to quantity
- C) Cost with respect to quantity
- D) Demand with respect to price

12. If $MC > AC$, what happens to the AC curve?

- A) Rises
- B) Falls
- C) Remains constant
- D) Becomes unpredictable

13. What is the average revenue equal to?

- A) Total Revenue
- B) Price per unit
- C) Total Cost
- D) Marginal Revenue

14. Marginal revenue is the rate of change of total revenue with respect to what?

- A) Price
- B) Cost
- C) Quantity sold
- D) Profit

15. Under pure competition, what determines the price?

- A) Producer
- B) Market
- C) Government
- D) Consumer

16. In a monopoly, what primarily determines the price of a commodity?

- A) Market demand
- B) Number of items produced and sold
- C) Government regulations
- D) Production costs