

Introduction to Calculus Concepts

Mathematics · Practice Test · 8 Questions

1. What does the word 'calculus' mean in Latin?

- A) Small stone
- B) Calculation
- C) Curve
- D) Limit

2. In calculus, what is a 'limit' generally understood as?

- A) A fixed number
- B) The value a function approaches
- C) A rate of change
- D) The area under a curve

3. What is the fundamental idea of 'differentiation' in calculus?

- A) Finding areas
- B) Measuring slopes or rates of change
- C) Adding up quantities
- D) Solving equations

4. What is the main concept of 'integration' in calculus?

- A) Finding instantaneous speeds
- B) Calculating the total accumulation or area
- C) Determining the maximum value
- D) Approximating values

5. Which of these is NOT a core concept in introductory calculus?

- A) Limits
- B) Derivatives
- C) Integrals
- D) Prime numbers

6. If a car's speed is changing, what mathematical concept from calculus helps describe this change at a specific moment?

- A) Average speed over time
- B) Instantaneous speed (a derivative)
- C) Total distance traveled
- D) The car's color

7. Imagine filling a swimming pool. What calculus concept would help find the total amount of water added over a period if the filling rate changes?

- A) Differentiation
- B) Finding the slope
- C) Integration
- D) The pool's shape

8. In calculus, what does a function represent?

- A) A single number
- B) A set of instructions relating an input to an output
- C) A geometric shape
- D) A historical event