

Pre-Calculus Fundamentals

Pre-Calculus · Practice Test · 10 Questions

1. What type of function has a graph that is a straight line?

- A) Quadratic
- B) Linear
- C) Exponential
- D) Logarithmic

2. Which geometric shape is described by the equation $x^2 + y^2 = r^2$?

- A) Parabola
- B) Ellipse
- C) Hyperbola
- D) Circle

3. What is the fundamental concept in trigonometry that relates angles to the ratios of side lengths in right triangles?

- A) SOH CAH TOA
- B) FOIL method
- C) Factoring
- D) Quadratic Formula

4. Which of the following is a key characteristic of an exponential function?

- A) Constant rate of change
- B) Parabolic shape
- C) Growth or decay at a constant percentage rate
- D) Oscillating behavior

5. What is the range of the sine function, $\sin(x)$?

- A) All real numbers
- B) $[0, \infty)$
- C) $(-\infty, 0]$
- D) $[-1, 1]$

6. What is the term for a sequence where the ratio between consecutive terms is constant?

- A) Arithmetic sequence
- B) Harmonic sequence
- C) Geometric sequence
- D) Fibonacci sequence

7. The graph of a quadratic function is always what shape?

- A) Hyperbola
- B) Parabola
- C) Circle
- D) Ellipse

8. What type of number includes both a real and an imaginary part?

- A) Rational number
- B) Irrational number
- C) Complex number
- D) Integer

9. In the Cartesian coordinate system, which axis represents the independent variable, typically 'x'?

- A) Vertical axis
- B) Horizontal axis
- C) Z-axis
- D) Polar axis

10. What is the common name for the point (0,0) in a Cartesian coordinate system?

- A) Vertex
- B) Focus
- C) Origin
- D) Intercept