

Pre-Calculus Fundamentals

Pre-Calculus · Answer Key · 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) $[0, ?)$
- C) $(-?, 0]$
- 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