

Pre-Calculus Foundations

Mathematics · Answer Key · 15 Questions

1. What is the value of the mathematical constant pi (?) rounded to two decimal places?

- A) 3.12
- B) 3.14**
- C) 3.16
- D) 3.18

2. In a Cartesian coordinate system, what is the horizontal axis typically called?

- A) The Y-axis
- B) The Z-axis
- C) The X-axis**
- D) The Origin

3. What is the slope of a horizontal line on a graph?

- A) One
- B) Undefined
- C) Negative
- D) Zero**

4. What is the result of squaring the number 12?

- A) 120
- B) 144**
- C) 169
- D) 196

5. If a function is written as $f(x) = 2x + 3$, what is the value of $f(x)$ when $x = 4$?

- A) 7
- B) 9
- C) 11**
- D) 14

6. A polygon with five sides is known as what?

- A) Hexagon
- B) Pentagon**
- C) Heptagon
- D) Octagon

7. Which term describes the set of all possible input values for a function?

A) Domain

B) Range

C) Slope

D) Intercept

8. What is the sum of the interior angles of a triangle in Euclidean geometry?

A) 90 degrees

B) 180 degrees

C) 270 degrees

D) 360 degrees

9. In the equation $y = mx + b$, what does 'm' represent?

A) Y-intercept

B) Slope

C) Variable

D) Constant

10. What is the square root of 81?

A) 7

B) 8

C) 9

D) 10

11. Which mathematical operation is the inverse of exponentiation?

A) Addition

B) Subtraction

C) Multiplication

D) Logarithm

12. What is the product of 0 and any real number?

A) The number itself

B) One

C) Zero

D) Undefined

13. What is the name for an angle that measures exactly 90 degrees?

A) Acute

B) Obtuse

C) Right

D) Reflex

14. What is the absolute value of -15?

A) -15

B) 0

C) 1

D) 15

15. If a sequence is 2, 4, 8, 16..., what is the next number in the pattern?

A) 20

B) 24

C) 32

D) 64