

Pre-Calculus Essentials

Mathematics · Practice Test · 8 Questions

1. What is the period of the parent function $f(x) = \sin(x)$?

- A) π
- B) 2π
- C) $\pi/2$
- D) 4π

2. Which of the following functions represents an even function, where $f(-x) = f(x)$?

- A) $f(x) = x^3$
- B) $f(x) = \sin(x)$
- C) $f(x) = x^2$
- D) $f(x) = 1/x$

3. In the unit circle, what are the coordinates (x, y) that correspond to an angle of 180 degrees?

- A) (0, 1)
- B) (1, 0)
- C) (0, -1)
- D) (-1, 0)

4. What is the sum of the first 10 terms of the arithmetic sequence 2, 4, 6, 8, ...?

- A) 110
- B) 100
- C) 90
- D) 120

5. Which value of x satisfies the logarithmic equation $\log_2(x) = 3$?

- A) 6
- B) 8
- C) 9
- D) 32

6. For any angle θ , what is the value of the identity $\sin^2(\theta) + \cos^2(\theta)$?

- A) 0
- B) 1
- C) 2
- D) $\tan(\theta)$

7. What is the vertical asymptote of the function $f(x) = 1/(x - 3)$?

- A) $x = 0$
- B) $x = 1$
- C) $x = 3$
- D) $y = 3$

8. What is the value of $\log_b(b)$ for any positive base b not equal to 1?

- A) 0
- B) 1
- C) b
- D) undefined