

Trigonometry Basics

Trigonometry · Answer Key · 18 Questions

1. In a right-angled triangle, what is the ratio of the side opposite an angle to the hypotenuse called?

- A) Cosine
- B) Tangent
- C) Sine**
- D) Cotangent

2. Which trigonometric ratio relates the adjacent side and the hypotenuse of a right-angled triangle?

- A) Sine
- B) Tangent
- C) Cosecant
- D) Cosine**

3. The sum of angles in any triangle is always:

- A) 90 degrees
- B) 180 degrees**
- C) 270 degrees
- D) 360 degrees

4. What is the value of sine of 0 degrees?

- A) 1
- B) 0.5
- C) 0**
- D) -1

5. What is the value of cosine of 90 degrees?

- A) 1
- B) 0.5
- C) 0**
- D) -1

6. In a right-angled triangle, the ratio of the opposite side to the adjacent side is:

- A) Sine
- B) Cosine
- C) Tangent**
- D) Secant

7. Which angle in a right-angled triangle has its sine equal to 1?

- A) 0 degrees
- B) 30 degrees
- C) 45 degrees
- D) 90 degrees**

8. What is the reciprocal of sine?

- A) Cosine
- B) Tangent
- C) Secant
- D) Cosecant**

9. Which trigonometric identity states that $\sin^2(?) + \cos^2(?) = 1$?

- A) Pythagorean Identity**
- B) Double Angle Identity
- C) Sum-to-Product Identity
- D) Reciprocal Identity

10. The tangent of 45 degrees is equal to:

- A) 0
- B) 0.5
- C) 1**
- D) ?3

11. In a unit circle, an angle of 90 degrees corresponds to the point:

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

12. Which trigonometric function has a period of 360 degrees (or 2π radians)?

- A) Tangent
- B) Cotangent
- C) Sine**
- D) Secant

13. The cosine of 0 degrees is:

- A) 0
- B) 0.5
- C) 1**
- D) -1

14. What is the ratio of the hypotenuse to the adjacent side called?

- A) Sine
- B) Cosine
- C) Tangent

D) Secant

15. The sine of 30 degrees is equal to:

A) 0.5

- B) $\frac{\sqrt{2}}{2}$
- C) $\frac{\sqrt{3}}{2}$
- D) 1

16. Which trigonometric ratio is the reciprocal of tangent?

- A) Sine
- B) Cosine
- C) Secant

D) Cotangent

17. In a right-angled triangle, the hypotenuse is always:

- A) The shortest side
- B) The longest side**
- C) Equal to the adjacent side
- D) Equal to the opposite side

18. What is the value of tangent of 0 degrees?

- A) 1
- B) 0.5

C) 0

D) Undefined