

Foundations of Trigonometry

Mathematics · Answer Key · 10 Questions

1. Which trigonometric function represents the ratio of the side opposite an angle to the hypotenuse in a right-angled triangle?

A) Sine

B) Cosine

C) Tangent

D) Secant

2. In a right-angled triangle, what is the sum of the two non-right angles?

A) 45 degrees

B) 90 degrees

C) 180 degrees

D) 360 degrees

3. What is the value of the sine of 90 degrees?

A) 0

B) 0.5

C) 1

D) Undefined

4. Hipparchus of Nicaea is historically recognized for creating the first known table of which function?

A) Sine

B) Cosine

C) Chord

D) Tangent

5. Which theorem states that the square of the hypotenuse is equal to the sum of the squares of the other two sides?

A) Pythagorean theorem

B) Thales's theorem

C) Euclidean theorem

D) Law of Sines

6. What is the standard unit of measurement for angles in trigonometry that corresponds to the radius of a circle wrapped around its circumference?

A) Degree

B) Gradian

C) Radian

D) Minute

7. In a right triangle, the tangent of an angle is equal to the sine divided by which other function?

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

8. What is the value of the cosine of 0 degrees?

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

9. How many degrees are in a full circle?

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

10. The study of trigonometry was originally developed to assist in the calculation of distances and angles for which field?

- A) Astronomy**
- B) Biology
- C) Geology
- D) Chemistry