

Fundamentals of Trigonometry

Trigonometry · Answer Key · 15 Questions

1. Which branch of mathematics primarily studies the relationships between triangle side lengths and angles?

- A) Calculus
- B) Trigonometry**
- C) Statistics
- D) Arithmetic

2. What is the Greek word from which the term 'trigonometry' is derived, meaning 'triangle'?

- A) Trigonon**
- B) Metron
- C) Gonia
- D) Kyklo

3. In a right-angled triangle, what is the longest side called?

- A) Adjacent
- B) Opposite
- C) Hypotenuse**
- D) Base

4. Which ratio in a right-angled triangle is defined as the 'opposite' side divided by the 'hypotenuse'?

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

5. What is the value of the sine of a 90-degree angle?

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

6. In a right triangle, the 'tangent' of an angle is equal to the ratio of which two sides?

- A) Opposite/Adjacent**
- B) Adjacent/Opposite
- C) Hypotenuse/Opposite
- D) Opposite/Hypotenuse

7. The study of trigonometry is historically linked to the measurement of what type of shapes?

- A) Squares
- B) Circles
- C) Triangles**
- D) Pentagons

8. Which trigonometric function is defined as the 'adjacent' side divided by the 'hypotenuse'?

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

9. In a right-angled triangle, how many degrees is the sum of the two non-right angles?

- A) 45 degrees
- B) 90 degrees**
- C) 180 degrees
- D) 360 degrees

10. Which ancient civilization is credited with early developments in trigonometry for use in astronomy?

- A) Greeks**
- B) Mayans
- C) Incas
- D) Celts

11. What is the mathematical constant 'pi' approximately equal to?

- A) 2.14
- B) 3.14**
- C) 4.14
- D) 5.14

12. How many degrees are there in a full circle?

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

13. The abbreviation 'SOH CAH TOA' is used to remember the basic ratios of which field?

- A) Algebra
- B) Geometry
- C) Trigonometry**
- D) Physics

14. Which trigonometric function is the reciprocal of the sine function?

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

15. In which type of triangle must the Pythagorean theorem ($a^2 + b^2 = c^2$) always apply?

- A) Equilateral
- B) Isosceles
- C) Right-angled**
- D) Scalene