CHAPTER-8 | Introduction to Trignometry

QUIZ-01

1. What is the value of sin 30°?

   A. 1/2 B. $\sqrt{3}/2$

   C. 1 D. 0 (A)

Explanation : The value of sin 30° is 1/2.

2. What is the trigonometric identity for $\cos^2 A + \sin^2 A$?

   A. 1 B. $\tan^2 A$

   C. $\sec^2 A$ D. $\text{cosec}^2 A$ (A)

Explanation : The identity $\cos^2 A + \sin^2 A = 1$ is a fundamental trigonometric identity.

3. In a right triangle, if tan A = 3/4, what is the value of sec A?

   A. 5/3 B. 5/4

   C. 4/5 D. 3/5 (A)

Explanation : Using the Pythagorean theorem, if tan A = 3/4, then the hypotenuse is 5, so sec A = 5/3.

4. What is the reciprocal of cosine?

   A. Secant B. Cosecant

   C. Cotangent D. Tangent (A)

Explanation : The reciprocal of cosine is secant.

5. Which of the following ratios is equivalent to BC/AB in a right triangle ABC?

   A. sin A B. cos A

   C. tan A D. sec A (C)

Explanation : The formula for tan A = BC/AB, which is the ratio of the opposite side to the adjacent side.

6. What is the value of cos 45°?

   A. $1/\sqrt{2}$ B. 1/2

   C. $\sqrt{3}/2$ D. 1 (A)

Explanation : The value of cos 45° is $1/\sqrt{2}$.

7. If sec A = 2, what is the value of cos A?

   A. 1/2 B. 2

   C. $1/\sqrt{2}$ D. 1/3 (A)

Explanation : Since sec A = 1/cos A, if sec A = 2, then cos A = 1/2.

8. In a right triangle, if the opposite side is 6 cm and the adjacent side is 8 cm, what is the value of tan A?

   A. 6/8 B. 8/6

   C. 6/10 D. 8/10 (A)

Explanation : Using the formula tan A = opposite / adjacent, tan A = 6/8.

9. Which of the following identities is true for all values of A?

   A. sin A = cos A B. $\tan A = 1 + \sec^2 A$

   C. $\cos^2 A + \sin^2 A = 1$ D. $\cot A = 1 + \tan^2 A$

   (C)

Explanation : The identity $\cos^2 A + \sin^2 A = 1$ is true for all values of A between 0° and 90°.

10. If cot A = 3, what is the value of tan A?

    A. 1/3 B. 3

    C. 3/4 D. 4/3 (A)

Explanation : Since cot A = 1/tan A, if cot A = 3, then tan A = 1/3.