1. What is the value of sin 30° + cos 30°?

A. $\frac{1}{2}$ B. 1

C. $\sqrt{3}$ D. $\frac{\sqrt{3}}{2}$ (B)

*Explanation :* 30° = $\frac{1}{2}$ and cos 30° = $\frac{\sqrt{3}}{2}$, so $\frac{1}{2} + \frac{\sqrt{3}}{2}$= 1.

2. What is the value of tan 30°?

A. $\frac{1}{\sqrt{3}}$ B. $\sqrt{3}$

C. 0 D. 1 (A)

*Explanation:* tan 30° = $\frac{1}{\sqrt{3}}$ based on the trigonometric ratios.

3. If cos x = $\frac{2}{3}$, then what is tan x?

A. $\frac{5}{2}$ B. $\frac{\sqrt{5}}{2}$

C. $\frac{\sqrt{5}}{3}$ D. $\frac{5}{\sqrt{2}}$ (C)

*Explanation:* From the identity tan x = $\frac{\sin x}{\cos x}$, we calculate the value using the Pythagorean theorem to find tan x.

4. What is the value of cos 45°?

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

C. $\frac{1}{2}$ D. $\frac{1}{3}$ (B)

*Explanation:* cos 45° = $\frac{1}{\sqrt{2}}$as per standard trigonometric values.

5. The ratio of the sides for an angle of 45° is:

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

C. $\sqrt{3}$ D. 1 (B)

*Explanation :* For 45°, both the sine and cosine values are equal to $\frac{1}{\sqrt{2}}$, and their ratio is 1.

6. The sum of the sine and cosine of 60° is:

A. 1

B. 0

C. 1.5

D. $\sqrt{2}$ (A)

*Explanation :* sin 60° = $\frac{\sqrt{3}}{2}$ and cos 60° = ½, so their sum is 1.

7. Which of the following is true for tan 90°?

A. 0 B.∞

C. 1 D. Not Defined (B)

*Explanation :* tan 90° tends towards infinity as per trigonometric principles.

8. In the triangle ΔABC, if the angle ∠ACB = 30° and AB = 5, the length of the side BC is:

A. 5 B. $\frac{5}{2}$

C. 2.5 D. $5\sqrt{3}$ (B)

*Explanation :* Using trigonometric ratios, we calculate the missing side BC using sin 30° = BC / AB.

9. The ratio of sin 0° to cos 90° is:

A. 1 B. 0

C. Undefined D. $\frac{1}{2}$ (B)

*Explanation :* sin 0° = 0 and cos 90° = 0, so the ratio is 0/0, which is undefined.

10. The value of sec 30° is:

A. $\frac{2}{\sqrt{3}}$ B. $\frac{2}{\sqrt{5}}$

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

*Explanation :* sec 30° = 1 / cos 30° = $\frac{2}{\sqrt{3}}$

मिशन ज्ञान
जब चाहें, जहाँ चाहें, जैसे चाहें!
100% FREE!
Video COURSES | QUIZ | PDF | TEST SERIES
Download Mission Gyan App