



Class 12 Mathematics | Inverse Trigonometric Functions

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The principal value of $\sin^{-1}(1/2)$ is:

A. $\pi/3$ B. $\pi/6$ C. $5\pi/6$ D. $-\pi/6$

2. The principal value of $\cos^{-1}(-1/2)$ is:

A. $4\pi/3$ B. $-2\pi/3$ C. $\pi/3$ D. $2\pi/3$

3. $\tan^{-1}(-1)$ equals:

A. $3\pi/4$ B. $-3\pi/4$ C. $-\pi/4$ D. $\pi/4$

4. The domain of $\sin^{-1}(2x)$ is:

A. $[0, 1/2]$ B. $[-1/2, 1/2]$ C. $[-1, 1]$ D. $\mathbb{R}$

5. The range of $\cos^{-1} x$ is:

A. $(-\pi/2, \pi/2)$ B. $(0, \pi)$ C. $[0, \pi]$ D. $[-\pi/2, \pi/2]$

6. $\sin^{-1} x + \cos^{-1} x$ equals:

A. 0 B. 2π C. $\pi/2$ D. π

7. $\sin(\sin^{-1}(3/5))$ equals:

A. $3/5$ B. $5/4$ C. $5/3$ D. $4/5$

8. $\cos(\sin^{-1}(3/5))$ equals:

A. $5/4$ B. $3/5$ C. $4/5$ D. $-4/5$

9. $\sin^{-1}(\sin(5\pi/6))$ equals:

A. $-\pi/6$ B. $\pi/6$ C. $5\pi/6$ D. $-5\pi/6$

10. $\cos^{-1}(\cos(5\pi/3))$ equals:

A. $5\pi/3$ B. $2\pi/3$ C. $\pi/3$ D. $-\pi/3$

11. The domain of $\cos^{-1}(x-2)$ is:

A. $[0, 2]$ B. $[-1, 1]$ C. $[-3, -1]$ D. $[1, 3]$

12. $\tan(\tan^{-1} 2)$ equals:

A. 2 B. $\pi/2$ C. -2 D. $1/2$

13. The principal value of $\sec^{-1} 2$ is:

A. $\pi/3$ B. $\pi/6$ C. $2\pi/3$ D. $-\pi/3$

14. The principal value of $\cot^{-1}(-1)$ is:

A. $3\pi/4$ B. $5\pi/4$ C. $-\pi/4$ D. $\pi/4$

15. The principal value of $\operatorname{cosec}^{-1}(-2)$ is:

A. $-\pi/6$ B. $7\pi/6$ C. $\pi/6$ D. $-5\pi/6$

ANSWER KEY — check after completing all 15 questions

1.B 2.D 3.C 4.B 5.C 6.C 7.A 8.C 9.B 10.C 11.D 12.A 13.A 14.A 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

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