



Class 11 Mathematics | Trigonometric Functions

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

1. Convert 150° into radians.

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

2. The degree measure of $7\pi/6$ radians is:

A. 240° B. 180° C. 150° D. 210°

3. An arc of length 6 cm subtends 2 radians. Its radius is:

A. 6 cm B. 4 cm C. 12 cm D. 3 cm

4. If $\sin \theta = 3/5$ and θ is acute, $\cos \theta$ equals:

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

5. Which function is positive in the second quadrant?

A. $\sin \theta$ B. $\cot \theta$ C. $\cos \theta$ D. $\tan \theta$

6. $\sin(\pi + \theta)$ equals:

A. $-\sin \theta$ B. $\cos \theta$ C. $-\cos \theta$ D. $\sin \theta$

7. The exact value of $\cos 15^\circ$ is:

A. $(\sqrt{6}-\sqrt{2})/4$ B. $(\sqrt{6}+\sqrt{2})/4$ C. $\sqrt{3}/2$ D. $1/2$

8. $\tan 75^\circ$ equals:

A. $2+\sqrt{3}$ B. $1+\sqrt{3}$ C. $\sqrt{3}$ D. $2-\sqrt{3}$

9. If $\tan \theta = 1/2$, then $\sin 2\theta$ equals:

A. $3/5$ B. $1/5$ C. $4/5$ D. $5/4$

10. The fundamental period of $\sin(3x)$ is:

A. 2π B. $\pi/3$ C. 3π D. $2\pi/3$

11. $\cos 2\theta$ can be written as:

A. $1-2\sin^2\theta$ B. $2\sin^2\theta-1$
C. $1+2\sin^2\theta$ D. $\sin^2\theta-\cos^2\theta$

12. $\sin 20^\circ \cos 40^\circ + \cos 20^\circ \sin 40^\circ$ equals:

A. $\sqrt{3}/2$ B. 0 C. $\sqrt{3}$ D. $1/2$

13. The range of $2+3\sin x$ is:

A. $[-3,3]$ B. $[2,5]$ C. $[-1,5]$ D. $[-5,1]$

14. If $\sin x + \cos x = 1$, then $\sin 2x$ equals:

A. $1/2$ B. -1 C. 0 D. 1

15. The value of $\sin(-7\pi/6)$ is:

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

ANSWER KEY — check after completing all 15 questions

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

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

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