MCQ WORKSHEET-I
CLASS X: CHAPTER - 8
INTRODUCTION TO TRIGONOMETRY

1. In ΔOPQ, right-angled at P, OP = 7 cm and OQ – PQ = 1 cm, then the values of sin Q.
(a) $\frac{7}{25}$ (b) $\frac{24}{25}$ (c) 1 (d) none of the these

2. If $\sin A = \frac{24}{25}$, then the value of cosA is
(a) $\frac{7}{25}$ (b) $\frac{24}{25}$ (c) 1 (d) none of the these

3. In ΔABC, right-angled at B, AB = 5 cm and $\angle ACB = 30°$ then the length of the side BC is
(a) $5\sqrt{3}$ (b) $2\sqrt{3}$ (c) 10 cm (d) none of these

4. In ΔABC, right-angled at B, AB = 5 cm and $\angle ACB = 30°$ then the length of the side AC is
(a) $5\sqrt{3}$ (b) $2\sqrt{3}$ (c) 10 cm (d) none of these

5. The value of $\frac{2\tan 30^0}{1+\tan^2 30^0}$ is
(a) sin 60° (b) cos 60° (c) tan 60° (d) sin 30°

6. The value of $\frac{1-\tan^2 45^0}{1+\tan^2 45^0}$ is
(a) tan 90° (b) 1 (c) sin 45° (d) 0

7. sin 2A = 2 sin A is true when A =
(a) 0° (b) 30° (c) 45° (d) 60°

8. The value of $\frac{2\tan 30^0}{1-\tan^2 30^0}$ is
(a) sin 60° (b) cos 60° (c) tan 60° (d) sin 30°

9. $9\sec^2 A - 9\tan^2 A =$
(a) 1 (b) 9 (c) 8 (d) 0

10. $(1 + \tan A + \sec A)(1 + \cot A - \operatorname{cosec} A) =$
(a) 0 (b) 1 (c) 2 (d) –1

11. $(\sec A + \tan A)(1 - \sin A) =$
(a) sec A (b) sin A (c) cosec A (d) cos A

12. $\frac{1+\tan^2 A}{1+\cot^2 A} =$
(a) $\sec^2 A$ (b) –1 (c) $\cot^2 A$ (d) $\tan^2 A$

MCQ WORKSHEET-II
CLASS X: CHAPTER - 8
INTRODUCTION TO TRIGONOMETRY

1. If sin 3A = cos (A – 26°), where 3A is an acute angle, find the value of A.
(a) 29^0 (b) 30^0 (c) 26^0 (d) 36^0

2. If tan 2A = cot (A – 18°), where 2A is an acute angle, find the value of A.
(a) 29^0 (b) 30^0 (c) 26^0 (d) none of these

3. If sec 4A = cosec (A – 20°), where 4A is an acute angle, find the value of A.
(a) 22^0 (b) 25^0 (c) 26^0 (d) none of these

4. The value of tan 48° tan 23° tan 42° tan 67° is
(a) 1 (b) 9 (c) 8 (d) 0

5. If ΔABC is right angled at C, then the value of cos(A + B) is
(a) 0 (b) 1 (c) ½ (d) n.d.

6. The value of the expression $\left[\frac{\sin^2 22^0 + \sin^2 68^0}{\cos^2 22^0 + \cos^2 68^0} + \sin^2 63^0 + \cos 63^0 \sin 27^0\right]$ is
(a) 3 (b) 0 (c) 1 (d) 2

7. If cos A = $\frac{24}{25}$, then the value of sinA is
(a) $\frac{7}{25}$ (b) $\frac{24}{25}$ (c) 1 (d) none of the these

8. If ΔABC is right angled at B, then the value of cos(A + C) is
(a) 0 (b) 1 (c) ½ (d) n.d.

9. If tanA = $\frac{4}{3}$, then the value of cosA is
(a) $\frac{3}{5}$ (b) $\frac{4}{3}$ (c) 1 (d) none of the these

10. If ΔABC is right angled at C, in which AB = 29 units, BC = 21 units and ∠ABC = α. Determine the values of $\cos^2\alpha + \sin^2\alpha$ is
(a) 0 (b) 1 (c) ½ (d) n.d.

11. In a right triangle ABC, right-angled at B, if tan A = 1, then the value of 2 sin A cos A =
(a) 0 (b) 1 (c) ½ (d) n.d.

12. Given 15 cot A = 8, then sin A =
(a) $\frac{3}{5}$ (b) $\frac{4}{3}$ (c) 1 (d) none of the these

MCQ WORKSHEET-III
CLASS X: CHAPTER - 8
INTRODUCTION TO TRIGONOMETRY

1. In a triangle PQR, right-angled at Q, PR + QR = 25 cm and PQ = 5 cm, then the value of sin P is

(a) $\frac{7}{25}$ (b) $\frac{24}{25}$ (c) 1 (d) none of the these

2. In a triangle PQR, right-angled at Q, PQ = 3 cm and PR = 6 cm, then ∠QPR =

(a) 0° (b) 30° (c) 45° (d) 60°

3. If $\sin(A - B) = \frac{1}{2}$ and $\cos(A + B) = \frac{1}{2}$, then the value of A and B, respectively are

(a) 45° and 15° (b) 30° and 15° (c) 45° and 30° (d) none of these

4. If sin (A – B) = 1 and cos(A + B) = 1, then the value of A and B, respectively are

(a) 45° and 15° (b) 30° and 15° (c) 45° and 30° (d) none of these

5. If $\tan(A - B) = \frac{1}{\sqrt{3}}$ and $\tan(A + B) = \sqrt{3}$, then the value of A and B, respectively are

(a) 45° and 15° (b) 30° and 15° (c) 45° and 30° (d) none of these

6. If $\cos(A - B) = \frac{\sqrt{3}}{2}$ and sin (A + B) = 1, then the value of A and B, respectively are

(a) 45° and 15° (b) 30° and 15° (c) 60° and 30° (d) none of these

7. The value of $2\cos^2 60^0 + 3\sin^2 45^0 - 3\sin^2 30^0 + 2\cos^2 90^0$ is

(a) 1 (b) 5 (c) 5/4 (d) none of these

8. sin 2A = 2 sin AcosA is true when A =

(a) 0° (b) 30° (c) 45° (d) any angle

9. sin A = cosA is true when A =

(a) 0° (b) 30° (c) 45° (d) any angle

10. If $\sin A = \frac{1}{2}$, then the value of $3\cos A - 4\cos^3 A$ is

(a) 0 (b) 1 (c) ½ (d) n.d.

11. If 3cotA = 4, then the value of $\cos^2 A - \sin^2 A$ is

(a) $\frac{3}{4}$ (b) $\frac{7}{25}$ (c) ½ (d) $\frac{24}{25}$

12. If 3tanA = 4, then the value of $\frac{3\sin A + 2\cos A}{3\sin A - 2\cos A}$ is

(a) 1 (b) $\frac{7}{25}$ (c) 3 (d) $\frac{24}{25}$

MCQ WORKSHEET-IV
CLASS X: CHAPTER - 8
INTRODUCTION TO TRIGONOMETRY

1. Value of θ, for $\sin 2\theta = 1$, *where* $0^0 < \theta < 90^0$ is:
(a) 30° (b) 60° (c) 45° (d) 135^0.

2. Value of $\sec^2 26^0 - \cot^2 64^0$ is:
(a) 1 (b) –1 (c) 0 (d) 2

3. Product $\tan 1^0 . \tan 2^0 . \tan 3^0 \ldots\ldots \tan 89^0$ is:
(a) 1 (b) –1 (c) 0 (d) 90

4. $\sqrt{1+\tan^2\theta}$ is equal to:
(a) $\cot\theta$ (b) $\cos\theta$ (c) $\cos ec\theta$ (d) $\sec\theta$

5. If $A + B = 90^0$, $\cot B = \frac{3}{4}$ then tanA is equal to;
(a) $\frac{3}{4}$ (b) $\frac{4}{3}$ (c) $\frac{1}{4}$ (d) $\frac{1}{3}$

6. Maximum value of $\frac{1}{\cos ec\theta}$, $0^0 < \theta < 90^0$ is:
(a) 1 (b) –1 (c) 2 (d) $\frac{1}{2}$

7. If $\cos\theta = \frac{1}{2}$, $\sin\phi = \frac{1}{2}$ then value of $\theta + \phi$ is
(a) 30° (b) 60° (c) 90° (d) 120^0.

8. If Sin (A + B) = 1 = cos(A – B) then
(a) $A = B = 90^0$ (b) $A = B = 0^0$ (c) $A = B = 45^0$ (d) A = 2B

9. The value of $\sin 60^0 \cos 30^0 - \cos 60^0 \sin 30^0$ is
(a) 1 (b) –1 (c) 0 (d) none of these

10. The value of $2\sin^2 30^0 - 3\cos^2 45^0 + \tan^2 60^0 + 3\sin^2 90^0$ is
(a) 1 (b) 5 (c) 0 (d) none of these