

CBSE TEST PAPER-01

MATHEMATICS (Class-10)

Chapter : Trigonometry

(Questions 1 marks)

- Q1. If $\theta = 45^\circ$. Find the value of $\sec^2\theta$
- Q2. Evaluate: $\cos 60^\circ \cos 45^\circ - \sin 60^\circ \sin 45^\circ$.
- Q3. Find the value of $\tan 15^\circ \cdot \tan 25^\circ \cdot \tan 30^\circ \tan 65^\circ \cdot \tan 85^\circ$.
- Q4. If θ is a positive acute angle such that $\sec \theta = \operatorname{cosec} 60^\circ$, then find the value of $2\cos^2 \theta - 1$
- Q5. Find the value of $\sin 65^\circ - \cos 25^\circ$ without using tables.
- Q6. Can $\cos \theta = \frac{5}{4}$ be possible?
- Q7. If $\sec 5A = \operatorname{cosec}(A - 36^\circ)$. Find the value of A.
- Q8. If $2 \sin \frac{x}{2} - 1 = 0$, find the value of x.
- Q9. If A, B and C are interior angles of ΔABC , then prove that $\cos \frac{B+C}{2} = \sin \frac{A}{2}$
- Q10. Find the value of $9\sec^2 A - 9\tan^2 A$.

(Questions 2/3 marks)

- Q1. Prove that $\sin^6\theta + \cos^6\theta = 1 - 3\sin^2\theta\cos^2\theta$.
- Q2. From the figure find the value of $\sin x$ and $\cos y$.
- Q3. If $5\tan\theta - 4 = \theta$, then find the value of $\frac{5\sin\theta - 4\cos\theta}{5\sin\theta + 4\cos\theta}$
- Q4. In ABC, $\angle C = 90^\circ$, $\tan A =$ and $\tan B = 3$. Prove that $\sin A \cdot \cos B + \cos A \cdot \sin B = 1$.
- Q5. If $\angle XAC = 45^\circ$, find the value of x and y in the figure