# 📚 MATH LOVE INSTITUTE

## Education as a Service (EaaS)

**Sample Question Paper - SET 1**

📱 +91-7869553517 | 🌐 www.mathlove.in



| | | | |
|---|---|---|---|
| **Class** | X | Subject | Mathematics (041) |
| **Chapter** | 8 - Introduction to Trigonometry | Time Allowed | 12 Minutes |
| **Maximum Marks** | 7 | Date | _____ |

## GENERAL INSTRUCTIONS:

1. This question paper contains **4 questions** from Chapter 8 - Introduction to Trigonometry.
2. All questions are compulsory.
3. Question 1 & 2 carry 1 mark each.
4. Question 3 carries 2 marks.
5. Question 4 carries 3 marks.
6. Use of calculator is not permitted.
7. Show all steps of your calculations clearly.
8. Rationalize denominators wherever applicable.

## HOW TO SUBMIT:

1. Solve this question paper in your notebook or on loose sheets.
2. Clearly write your **Name, CBSE Roll Number (if available), School Name, Place, and Date** on the first page.

3. Upload your solved paper at our website: **www.mathlove.in**
4. Check your **detailed report card on the website** after evaluation.
5. For any queries or assistance, WhatsApp us at **+91-7869553517**



## SECTION A - 1 MARK QUESTIONS

**Q1.** If $\sin \alpha = \sqrt{3}/2$ and $\cos \beta = \sqrt{3}/2$, then find the value of $\tan \alpha \cdot \tan \beta$. **[1]**

**Q2.** If $(\sec^2\theta - 1)(\operatorname{cosec}^2\theta - 1) = 1$, find the value of $\tan^2\theta + \cot^2\theta$. **[1]**



## SECTION B - 2 MARKS QUESTION

**Q3.** If $\sin \theta + \cos \theta = \sqrt{3}$, then prove that $\tan \theta + \cot \theta = 1$. **[2]**



## SECTION C - 3 MARKS QUESTION

**Q4.** Prove that:

$(\operatorname{cosec} \theta - \sin \theta)(\sec \theta - \cos \theta)(\tan \theta + \cot \theta) = 1$

[Show all steps clearly] **[3]**





H-1 Street 2, V V Vihar, Shankar Nagar, Raipur (C.G.)

+91-7869553517 | www.mathlove.in | info@mathlove.in