CLASS	**X**
SUBJECT	**MATHEMATICS**
DATE OF HW	**16 APRIL 2024**
DATE OFSUBMISSION	**18 APRIL 2024**
Chapter/Topic	**CH8: INTRODUCTION TO TRIGONOMETRY**

Q1	Choose the correct options 1. If x tan 45° sin 30° = cos 30° tan 30°, then x is equal to (a) √3 (b) 1/2 (c) 1/√2 (d) 1 2. Given that sin θ = $\frac{a}{b}$, then cosθ is equal to (a) $\frac{b}{\sqrt{b^2-a^2}}$ (b) $\frac{b}{a}$ (c) $\frac{\sqrt{b^2-a^2}}{b}$ (d) $\frac{a}{\sqrt{b^2-a^2}}$ 3. If sinA + $\sin^2$ A = 1, then the value of the expression ($\cos^2$ A + $\cos^4$ A) is (a) 1 (b) $\frac{1}{2}$ (c) 2 (d) 3 4. If ΔABC is right angled at C, then the value of cos (A + B) is (a) 0 (b) 1 (c) $\frac{1}{2}$ (d) $\frac{\sqrt{3}}{2}$	**4**
Q2	Prove the following identity: (a) $(\sin A + \operatorname{cosec} A)^2 + (\cos A + \sec A)^2 = 7 + \tan^2 A + \cot^2 A$	3

Q3	Answer the following questions If tan (A – B) = $\frac{1}{\sqrt{3}}$ and tan (A + B) = √3, find A and B.	3