

KALYAN ACADEMY

BHARATH NAGAR, HYD-18

TRIGONOMETRY | CLASS X | WORKSHEET -2

1. Evaluate $4 \cot^2 45 - \sec^2 60 + \sin^2 60 + \cos^2 90$?
2. Evaluate $2 \tan^2 45 + \cos^2 30 - \sin^2 60$?
3. Prove that $4(\sin^4 30 + \cos^4 60) - 3(\cos^2 45 - \sin^2 90) = 2$
4. Evaluate $\sin^2 45 + \cos^2 45 + \tan^2 45 + \cot^2 45 + \sec^2 45 + \operatorname{cosec}^2 45$?
5. Evaluate $\tan 45 / \operatorname{cosec} 30 + \sec 60 / \cot 45 - 5 \sin 90 / 2 \cos 0$?
6. Evaluate $\frac{1}{4} (\cot^4 30 \cdot \operatorname{cosec}^2 60) + \frac{3}{2} (\sec^2 45 - \tan^2 30) - 5 \cos^2 60$
7. Evaluate $4(\sin^4 30 + \cos^4 60) - \frac{2}{3} (\sin^2 60 - \cos^2 45) + \frac{1}{2} \tan^2 60$?
8. If $\tan x = \sin 45 \cdot \cos 45 + \sin 30$. Determine x ?
9. If $\cos x = \cos 60 \cdot \cos 30 + \sin 60 \sin 30$, then find x ?
10. If $\sin 2x = \sin 60 \cdot \cos 30 - \cos 60 \sin 30$, find x ?
11. If $\cos (40+x) = \sin 30$. Find x ?
12. Find a) $\sin 15$ b) $\cos 15$ c) $\tan 15$
13. Find a) $\sin 75$ b) $\cos 75$ c) $\tan 75$
14. Show that $1 - \sin 60 / \cos 60 = 2 - \sqrt{3}$
15. If $\sin \theta = \cos \theta$ then find the value of $2 \tan^2 \theta + \sin^2 \theta - 1$