

GOOGLE ACADEMY

CLASSES - V to XII (All subjects for CBSE/ICSE/ISC) & IIT, NEET (Foundation)

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Add- Near Dabouli Durga Mandir, Kanpur.

Mob no. -6306893082, 9305617040 Topic \rightarrow TRIGONOMETRY-2

Class- XIth

Q.1 \rightarrow Prove that: $2 \cos \frac{\pi}{13} \cos \frac{9\pi}{13} + \cos \frac{3\pi}{13} + \cos \frac{5\pi}{13} = 0$.

Q.2 \rightarrow Prove that: $\cos 20^\circ \cos 40^\circ \cos 60^\circ \cos 80^\circ = \frac{1}{16}$

Q.3 \rightarrow Prove that: $\sin A \sin \left(\frac{\pi}{3} - A \right) \sin \left(\frac{\pi}{3} + A \right) = \frac{1}{4} \sin 3A$

Q.4 \rightarrow Prove that: $4 \cos n \cos \left(\frac{\pi}{3} + n \right) \cos \left(\frac{\pi}{3} - n \right) = \cos 3n$

Q.5 \rightarrow Prove that: $\sin 20^\circ \sin 40^\circ \sin 60^\circ \sin 80^\circ = \frac{3}{16}$

Q.6 \rightarrow Prove that: $\sin n + \sin 3n + \sin 5n + \sin 7n = 4 \cos n \cos 2n \sin 4n$.

Q.7 \rightarrow Prove that: $\cos 2n \cos \frac{n}{2} - \cos 3n \cos \frac{9n}{2} = \sin 5n \sin \frac{5n}{2}$

Q.8 \rightarrow Prove that: $(\cos a - \cos b)^2 + (\sin a - \sin b)^2 = 4 \sin^2 \left(\frac{a-b}{2} \right)$

Q.9 \rightarrow Prove that: $\frac{\cos 4n + \cos 3n + \cos 2n}{\sin 4n + \sin 3n + \sin 2n}$