THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

Class: 11 A	MATHEMATICS-041	Ref. Book:NCERT EXEMPLAR
Worksheet No: 5	Topic: Trigonometry	Type: Descriptive
Date of Issue:10-08-23		Date of Submission: 14-08-23

1.Find the value of a) cos (-870) b) tan $(-\frac{25\pi}{3})$

2.Express -22°30' in radian measure.

3.Express $\frac{5}{6}$ radian in degree measure.

4. Evaluate :- a) tan $(\frac{13\pi}{12})$ b) tan($22\frac{1^\circ}{2}$)

Prove that:-

5. $\sin10^\circ\sin50^\circ\sin60^\circ\sin70^\circ = \frac{\sqrt{3}}{16}$

6. $\cos20^\circ\cos40^\circ\cos60^\circ\cos80^\circ = 1/16$

7. $\frac{sec8A-1}{sec4A-1} = \frac{tan8A}{tan2A}$

8. $\tan 70^\circ = \tan20^\circ + 2\tan50^\circ$

9. $\tan20^\circ.\ \tan40^\circ.\tan60^\circ.\tan80^\circ = 3$

10. $\frac{cos2x\ sinx+cos6xsin3x}{sin2xsinx+sin6xsin3x}$ = cot5x

11. $\frac{1+sin2x-cos2x}{1+sin2x+cos2x}$ = tanx

13.1f tanx = ¾ and $< x < \frac{3\pi}{2}$, find the values of $\sin\frac{x}{2}$, $\cos\frac{x}{2}$ and $\tan\frac{x}{2}$

14.prove that $\cos^2A + \cos^2(A + \frac{\pi}{3}) + \cos^2(A-\frac{\pi}{3}) = 3/2$