INDIAN SCHOOL NIZWA

MATHEMATICS WORKSHEET-1

CH-3 TRIGONOMETRY

DATE: MAY CLASS :XI

1. Evaluate $\cos 15^{o} - \sin 15^{0}$
2. Find the domain and range of the function $f(x) = \sqrt{9 - x^2}$
3. If $\cos\theta = \frac{-1}{2} < \theta < 3$ Find the value of $4\tan 2\theta - 3\operatorname{cosec} 2\theta$
4. Find the radian measure corresponding to $37^{0}30'$
5. Convert $40^{0}20'$ into radian measure.
6. Find $\cos(\frac{\pi}{4} - \alpha)Cos(\frac{\pi}{4} - \beta) - Sin\ (\frac{\pi}{4} - \alpha)Sin\ (\frac{\pi}{4} - \beta)$
7. In a circle of diameter 40 cm , the length of a chord is 20cm, .find the length of minor arc of the chord.
8. Prove that $\cos 2x.\cos\frac{x}{2} - \cos 3x.\cos\frac{9x}{2} = \sin 5x.\sin\frac{5x}{2}$
9. Find the value of $\sin(-\frac{11\pi}{3})$
10. Rewrite each of the following as the sin or cos of a single angle and evaluate where possible.
    i. $\cos 40° \cdot \cos 50° - \sin 40° \cdot \sin 50°$
    ii. $2.\sin 110° \cdot \cos 10° - \cos 290° \cdot \cos 80°$

11. Prove: i. $\frac{2\sin x \cdot \cos x}{cos^4\ x - \sin^4 x} = \tan 2x$