

SET-A**S Maths Classes, Jalgaon**Std: Xth (CBSE)

Unit Test

Marks: 20

Sub: Geometry

Ex.: - 8.4.

Time: 1Hr

Q.1] Solve the following: (12)

i) Evaluate: $(\operatorname{cosec}\theta - \cot\theta)^2 = \frac{1-\cos\theta}{1+\cos\theta}$.

ii) Prove that: $(\operatorname{cosec}\theta - \cot\theta)^2 = \frac{1-\cos\theta}{1+\cos\theta}$

iii) Prove that: $\frac{1+\sec A}{\sec A} = \frac{\sin^2 A}{1-\cos A}$.

iv) Prove that: $\sqrt{\frac{1-\cos A}{1+\cos A}} = \operatorname{cosec} A - \cot A$.

Q.2] prove the following: (08)

i) $\frac{\cos A - \sin A + 1}{\cos A + \sin A - 1} = \operatorname{cosec} A + \cot A$.

ii) $\frac{\tan\theta}{1-\cot\theta} + \frac{\cot\theta}{1-\tan\theta} = 1 + \sec\theta \cdot \operatorname{cosec}\theta$

SET-B**S Maths Classes, Jalgaon**Std: Xth (CBSE)

Unit Test

Marks: 20

Sub: Geometry

Ex.: - 8.4.

Time: 1Hr

Q.1] Solve the following: (12)

i) Evaluate: $\frac{\cos A}{1+\sin A} + \frac{1+\sin A}{\cos A} = 2\sec A$

ii) Prove that: $\sqrt{\frac{1+\sin A}{1-\sin A}} = \sec A + \tan A$.

iii) Prove that: $\frac{1+\tan^2 A}{1+\cot^2 A} = \tan^2 A$

iv) Prove that:
 $\sec^2\theta + \operatorname{cosec}^2\theta = \sec^2\theta \operatorname{cosec}^2\theta$

Q.2] prove the following: (08)

i) $\frac{\sin\theta - 2\sin^3\theta}{2\cos^3\theta - \cos\theta} = \tan\theta$.

ii) $(\operatorname{cosec} A - \sin A)(\sec A - \cos A) = \frac{1}{\tan A + \cot A}$