

1067-32-513

Yaacov Kopeliovich* (ykopeliovich@yahoo.com). *Thomae formula for general cyclic covers of \mathbb{CP}^1 .*

Let X be a general cyclic cover of \mathbb{CP}^1 ramified at m points, $\lambda_1 \dots \lambda_m$. we define a class of non positive divisors on X of degree $g - 1$ supported in the pre images of the branch points on X , such that the Riemann theta function doesn't vanish on their image in $J(X)$. We generalize the results of [BR],[Na] and [EG] and prove that up to a certain determinant of the non standard periods of X , the value of the Riemann theta function at these divisors raised to a high enough power is a polynomial in the branch point of the curve X . Our approach is based on a refinement of Accola's results for 3 cyclic sheeted cover [Ac1] and a generalization of Nakayashiki's approach explained in [Na] for general cyclic covers. (Received September 08, 2010)