ARITHMETIC COVOLUME OF THE MODULAR GROUP

VINCENT EMERY

3rd Graduate Colloquium, Bern, January 24 - 25, 2008

ABSTRACT. We will sketch the method to compute arithmetically the covolume of the action of the modular group $SL_2(\mathbb{Z})$ on the hyperbolic plane $\mathbb{H}^2$. In contrast to the usual (and much simplier) computation of this covolume, we don't need to know a fundamental domain for the action of the group. This indicates how one can deal with covolume of more general arithmetic subgroups of Lie groups.

UNIVERSITY OF FRIBOURG, SWITZERLAND
E-mail address: `vincent.emery@unifr.ch`