

MATH 607 WINTER 2017
HOMEWORK 4
INSTRUCTOR: ROBERT LIPSHITZ

- (1) In class, we defined a notion of nodal Riemann surfaces (with complex structures). Define an analogous notion for hyperbolic surfaces.
- (2) In class, we sketched a proof of the following: *Proposition*. For any $\epsilon > 0$, the set of Diff_0 -equiv classes of constant curvature Riemannian metrics with injectivity radius $> \epsilon$ is compact.
Flesh out the proof.
- (3) Any of the exercises in Section 4.2 of [MS12].

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