

MATH 351: RIEMANN SURFACES AND DESSINS D'ENFANTS  
HOMEWORK #18

**Problem 18.1.** Let  $f : X \rightarrow \mathbb{P}^1$  be a nonconstant morphism of Riemann surfaces that is ramified above exactly two points. Show that  $X \cong \mathbb{P}^1$  and  $f(z) = z^d$  where  $\deg(f) = d \geq 2$ .