

Homework 6

Due: Friday, 4/16/2004

1. Find a Dirichlet region for the cyclic group G generated by $\alpha \in \text{Isom}^+(\mathbb{H})$, where α is

- (a) elliptic of finite order,
- (b) parabolic,
- (c) hyperbolic.

Find the corresponding Cayley tessellations in all the cases.

2. Find the Cayley graph C of a free group on two generators, F_2 . What is the quotient space C/F_2 ? (The quotient space is defined to be the set of orbits $F_2x = \{gx : g \in F_2\}$.)