

Info

This note, that [was found here](#), as a part of [a collection](#) is written (completely with human hands) by [Rupadarshi Ray](#), was created on February 14, 2026 3:07:44 PM, was last modified on September 5, 2026 5:51:58 PM, and was exported on September 7, 2026 2:50:39 PM.

$$\Gamma_\lambda := \left\langle z \mapsto z + \lambda, -\frac{1}{z} \right\rangle \subset PSL(2)(\mathbb{R})$$
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for $|\lambda| \geq 2$

Proposition:

For $|\lambda| \geq 2$

$$\Gamma_\lambda := \left\langle z \mapsto z + \lambda, -\frac{1}{z} \right\rangle \cong F_2$$

for $\lambda = 2 \cos \left(\frac{\pi}{q} \right)$

For $q \geq 3$ we have

$$H_q := \left\langle z \mapsto -\frac{1}{z}, z \mapsto z + 2 \cos \left(\frac{\pi}{q} \right) \right\rangle$$

- [1]
- [2]

Current note has 0 direct children and 0 total descendants.

- [squishy](#)

• SL

• H_q

And it has 15 siblings.

- [squishy](#)

• SL

• $\underline{SL}(\underline{2})$

• $SL(2)(\mathbb{C})$

• $PSL(n, \mathbb{C})$

• $SL(2)(\mathbb{R})$

• $SL(2)(\mathbb{R}) / SL(2)(\mathbb{Z})$

• H_q

• $PSL(2)(\mathbb{Z})[2]$

• $[PSL(2)(\mathbb{Z})[2], PSL(2)(\mathbb{Z})[2\$]]$

• $PSL(2)(\mathbb{Z})[N]$

• $SL(3, \mathbb{R})$

• $SL(2)(\mathbb{Z})$

• $PSL(2)(\mathbb{Z})$

• [Congruent subgroups of \$PSL\(2\)\(\mathbb{Z}\)\$](#)

• $SL(n, \mathbb{Z})$

• $SL(2)(\mathbb{Z}_2)$
1. https://en.wikipedia.org/wiki/Modular_group#Hecke_groups↔

2. <https://www-fourier.univ-grenoble-alpes.fr/~funar/teichmuller.pdf>↔