

Worksheet 14

1. In S_3 , let $H = \langle (1\ 2) \rangle$ and consider the relation of $\equiv \pmod{H}$. Compute the equivalence classes.
2. In $\mathbb{R}^2$, let $H = \{(x, y) : y = x\}$. Draw 5 different equivalence classes for $\equiv \pmod{H}$.
3. In $GL_2(\mathbb{R})$, let $H = SL_2(\mathbb{R})$, the determinant 1 matrices. Determine what the equivalence classes are for $\equiv \pmod{H}$.