

**Exercise 3.75.** [1YH] Consider  $A = \mathbb{R}^2$  and consider the relations

$$(x, y) \sim (x', y') \iff (x - x' \in \mathbb{Z} \wedge y - y' \in \mathbb{Z})$$

between elements of  $\mathbb{R}^2$  :

- show that it is an equivalence relation;
- graphically represent equivalence classes;
- describe the set  $A / \sim$ .