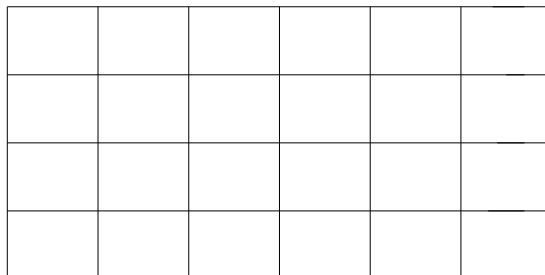


MP464/EP402: Solid State Physics

Assignment 1

Imagine extended the pattern below infinitely far, in both the horizontal and vertical directions, to make a 2-dimensional rectangular lattice. Identify all the point symmetries of the lattice, that is all the reflections and rotations of the lattice that leave at least one point fixed.



The three crystal structures below are obtained by adding different bases to the rectangular lattice. In all three cases identify all the point symmetries of the resulting crystal structure (they are all different).

