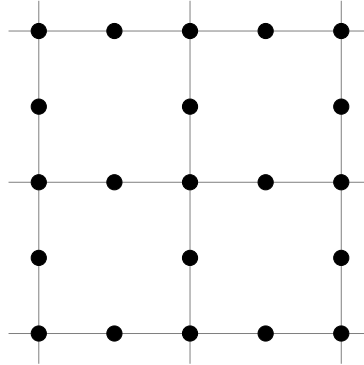


**Problem 1.1 Side-centered square lattice**

Consider a side-centered square lattice.



1. To what type of Bravais lattice does it belong?
2. Draw the primitive cell. What is the basis?

**Problem 1.2 Centered rectangular lattice**

What is the difference in symmetry between the rectangular and the centered rectangular lattice? *Hint:* Check all possible symmetry operations of these lattices.