MATRL 100A: Structure and Properties I, assignment 2

Chapter 3

Sketch the hexagonal unit cell (two equilateral triangles, back-to-back) and then place atoms at all the corners. Make a sketch to verify that tiling such an objet does indeed create a single close-packed layer.

Now sketch another hexagonal cell and place an atom in the middle of one of the triangles. Tile this to verify that another close-packed layer is created. Do so for the other triangle in the hexagonal cell.

Try to Sketch a cube that can show that cubic close packing is equivalent to FCC.

Answer the following questions from the book:

3.2, 3.3, 3.6

3.8, 3.12, 3.13