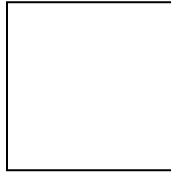


1. Iron, Fe, has a BCC structure at room temperature.
Atomic radius Fe = 0.126 nm, Atomic number Fe = 26, Atomic mass Fe = 55.845
 - a. How many atoms are there per unit cell for Fe?
 - b. What is the coordination number for Fe?
 - c. Determine **a**, the lattice constant, for Fe (calculate it – this should be a numerical answer).

2. Aluminum, Al, has an FCC structure.
Atomic radius Al = 0.143 nm, Atomic number Al = 13, Atomic mass Al = 26.98
 - a. Draw the atom placement for an FCC {1 0 0} type plane.



- b. Calculate the expected density of Al.