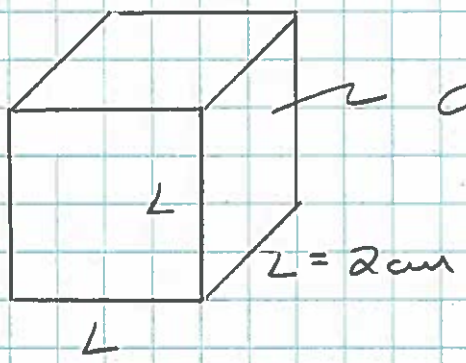

$\rho_A = 2700\ kg/m^3$

Mass : $M = \rho_A L^3$

mass number for aluminum, $A = 27$

Molar mass: $M_{mol} = \frac{A}{1000} = 0.027\ kg/mol$

Number of moles: $n = \frac{M}{M_{mol}} = \frac{\rho_A L^3}{M_{mol}}$

So, Number of atoms, $N = n N_A$

$= \frac{\rho_A L^3}{M_{mol}} N_A$

$\therefore N = 4.816 \times 10^{23}$ atoms.