*Answer on Question #70505– Chemistry – General Chemistry*

**Task**

What is the mass of 1.7 × 10^23 atoms of zinc (Zn)? Answer in grams.

**Solution**

Standard atomic weight of zinc is 65.38.

N - number of particles; $N_A$ - Avogadro constant.

$$v\ (Zn) = \frac{N(Zn)}{N_A} = \frac{1.7 \cdot 10^{23}}{6.02 \cdot 10^{23}} = 0.282\ mol.$$

$$m(Zn) = v\ (Zn) \cdot A_r(Zn) = 0.282 \cdot 65.38 = 18.5\ g.$$

**Answer**

$18.5\ g.$