

Warm Up

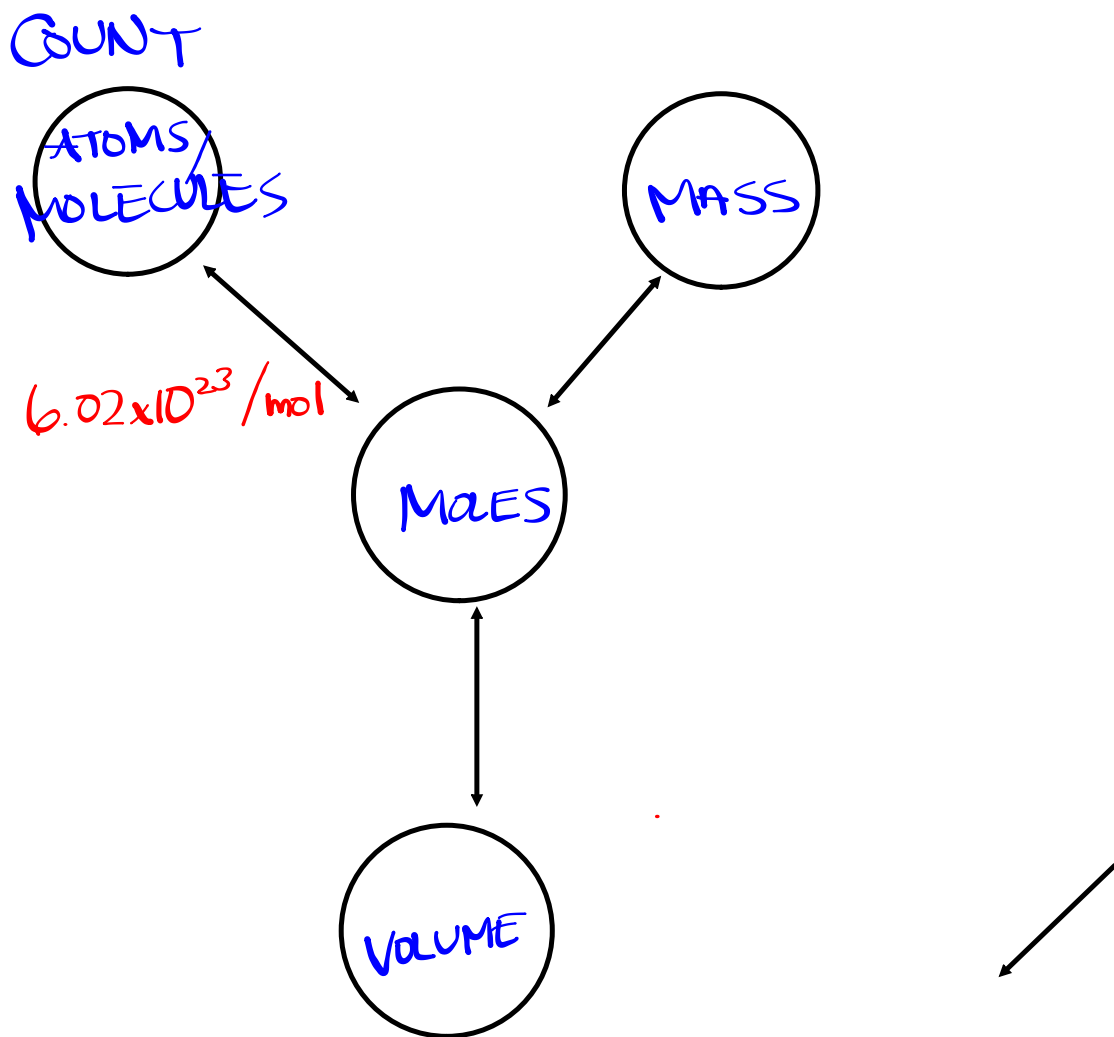
Exp EE

How many moles are in 2.14×10^{24} molecules of NO_2 ?

$$\frac{2.14 \times 10^{24} \text{ molecules}}{6.02 \times 10^{23} \text{ molecules}} \times \frac{1 \text{ mol}}{1} = \underline{\underline{3.55 \text{ mol NO}_2}}$$

How many atoms are in 12.8 moles of iron?

$$\begin{aligned} 12.8 \text{ mol Fe} &\times \frac{6.02 \times 10^{23} \text{ atoms}}{1 \text{ mol Fe}} \\ &= 7.7056 \times 10^{24} \text{ atoms} \\ &= 7.71 \times 10^{24} \text{ atoms.} \end{aligned}$$



How many atoms are in 6.08 moles of C_4H_8 ?

$$\begin{aligned} & 6.08 \text{ mol} \times \frac{6.02 \times 10^{23} \text{ atoms}}{1 \text{ mol}} \times \frac{12 \text{ atoms}}{1 \text{ molecule C}_4\text{H}_8} \\ & \qquad \qquad \qquad \qquad \qquad \qquad \qquad 4+8 \\ & = 4.392192 \times 10^{25} \text{ atoms} \\ & = 4.39 \times 10^{25} \text{ atoms} \end{aligned}$$

#3-6 p. 291-292

