

Name _____ Date _____ Class _____

Moles Worksheet

Type of Problem	Start with...	Solve for...	Equality Equation
Mole – Mass	Mole	Mass (g)	Molar Mass: 1 mole = _____ g
	Mass (g)	Mole	Molar Mass: 1 mole = _____ g
Mole – Particle	Mole	Particles <small>(atoms, formula units, or molecules)</small>	Avogadro's Number: 1 mole = 6.02×10^{23} particles <small>(atoms, formula units, or molecules)</small>
	Particles <small>(atoms, formula units, or molecules)</small>	Mole	Avogadro's Number: 1 mole = 6.02×10^{23} particles <small>(atoms, formula units, or molecules)</small>
Mole – Volume	Mole	Volume (L)	Molar Volume: 1 mole = 22.4 L <small>(at STP)</small>
	Volume (L)	Mole	Molar Volume: 1 mole = 22.4 L <small>(at STP)</small>
Mass – Particle	Mass (g)	Particles <small>(atoms, formula units, or molecules)</small>	$\begin{array}{ccccc} \text{g} & \rightarrow & \rightarrow & \text{mol} & \rightarrow & \rightarrow & \text{particles} \\ & & \uparrow & & & \uparrow & \\ & & \text{Molar Mass:} & & & \text{Avogadro's Number:} & \\ & & 1 \text{ mole} = ______ \text{ g} & & & 1 \text{ mole} = 6.02 \times 10^{23} \text{ particles} & \end{array}$
	Particles <small>(atoms, formula units, or molecules)</small>	Mass (g)	$\begin{array}{ccccccc} \text{particles} & \rightarrow & \rightarrow & \text{mol} & \rightarrow & \rightarrow & \text{g} \\ & & & \uparrow & & & \uparrow \\ & & & \text{Avogadro's Number:} & & & \text{Molar Mass:} \\ & & & 1 \text{ mole} = 6.02 \times 10^{23} \text{ particles} & & & 1 \text{ mole} = ______ \text{ g} \end{array}$

1. How many moles are present in 34 grams of Cu(OH)₂?
 Type of problem? _____ Equality Equation(s) Required? _____

2. How many moles are present in 2.45×10^{23} molecules of CH₄?
 Type of problem? _____ Equality Equation(s) Required? _____

3. How many grams are there in 3.4×10^{24} molecules of NH₃?
 Type of problem? _____ Equality Equation(s) Required? _____