

Moles Worksheet

- 1) Define "mole".
- 2) How many moles are present in 34 grams of $\text{Cu}(\text{OH})_2$?
- 3) How many moles are present in 2.45×10^{23} molecules of CH_4 ?
- 4) How many grams are there in 3.4×10^{24} molecules of NH_3 ?
- 5) How much does 4.2 moles of $\text{Ca}(\text{NO}_3)_2$ weigh?
- 6) What is the molar mass of MgO ?
- 7) How are the terms "molar mass" and "atomic mass" different from one another?
- 8) Which is a better unit for expressing molar mass, "amu" or "grams/mole"?

Moles Worksheet (Solutions)

- 1) Define "mole".
 6.02×10^{23} of anything, usually atoms or molecules.
- 2) How many moles are present in 34 grams of $\text{Cu}(\text{OH})_2$?
0.35 moles
- 3) How many moles are present in 2.45×10^{23} molecules of CH_4 ?
0.41 moles
- 4) How many grams are there in 3.4×10^{24} molecules of NH_3 ?
96 grams
- 5) How much does 4.2 moles of $\text{Ca}(\text{NO}_3)_2$ weigh?
689 grams
- 6) What is the molar mass of MgO ?
40.3 grams/mole
- 7) How are the terms "molar mass" and "atomic mass" different from one another?
"Molar mass" is used to describe the mass of one mole of a chemical compound, while "atomic mass" is used to describe the mass of one mole of an element or the mass of one atom of an element.
- 8) Which is a better unit for expressing molar mass, "amu" or "grams/mole"?
"Grams/mole" is better, because any macroscopic amount of a substance is better expressed in grams than amu.