

HW Moles

1. How many moles of Au are in 212 g of Au?
2. If you had a container that has 47.5 L of a gas, how many moles would you have?
3. If you had 5.4 moles of copper how many atoms would you expect to have?
4. If you had 2.5 moles of $\text{Cu}(\text{NO}_3)_2$, how many grams would you expect to have?
5. If you were told to that a chemical reaction required 0.7 grams of Mg, how many moles of Mg would that be?
6. If a chemical reaction produced 10.4 L of carbon dioxide, how many moles would that be?
7. If you had 100 L of Ne how many moles would that be?
8. What would the percent composition of oxygen be in the compound $\text{Fe}(\text{OH})_3$?

9. What would the percent composition of Cr be in the compound $\text{Al}_2(\text{Cr}_2\text{O}_7)_3$?
10. What is the percent water in the hydrate $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$?
11. What would the empirical formula of a compound be if there were 62.1% C, 13.8% H and 24.1% N?
12. What would the molecular formula of a compound be if the empirical formula of the compound is CH_2O and the molar mass is 180 g/mol?
13. What is the molecular formula of a compound with 50.7% C, 4.2% H, and 45.1% O if the molar mass is 142 g/mol?
14. Convert 77.56 g of CaCO_3 to moles.

15. Convert 2.55×10^{24} molecules of KCl to grams.

16. Convert 0.664 moles of HF to molecules.

17. Convert 0.0931 mol of BaCl_2 to grams.

18. Convert 86 g of $\text{Fe}(\text{NO}_3)_3$ to formula units.

19. Convert 8.55×10^{21} molecules of NaCl to grams.

20. Convert 2.5×10^{-3} mol of CuF_2 to liters.