

Student Name:

Teacher Name:

Class Name/Subject: ENH Chemistry

Period:

Assignment Week #: 2

WS 1: Molar Mass WS

Find the molar masses (in g/mol) of the following compounds. Remember that all molar masses should be rounded to the hundredths place (two decimals).

_____ 1) Ca _____ 7) $\text{Fe}_3(\text{PO}_4)_2$

_____ 2) NaBr _____ 8) $(\text{NH}_4)_2\text{S}$

_____ 3) PbSO_4 _____ 9) $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2$

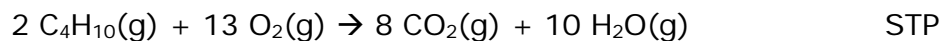
_____ 4) Na_3PO_4 _____ 10) $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$

_____ 5) $(\text{NH}_4)_2\text{CO}_3$ _____ 11) $\text{Ba}(\text{OH})_2 \cdot 8\text{H}_2\text{O}$

_____ 6) $\text{C}_6\text{H}_{12}\text{O}_6$

WS 2: Stoich WS 0 (mole-mole)

Use the following balanced reaction for **all** problems in this section. Show your work using conversions.



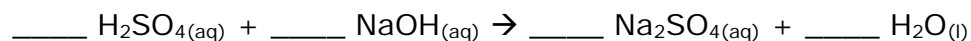
1. How many moles of C_4H_{10} are burned if 20 moles of CO_2 gas are produced?
2. How many moles of O_2 gas are required to produce 815 mol of H_2O gas?
3. How many moles of H_2O gas are produced when 2025 moles of C_4H_{10} are burned?
4. How many moles of O_2 gas are required to produce 112.0 moles of CO_2 gas?

5. Butane (C_4H_{10}) is used for campers and trailers. If 60.0 moles of butane are burned by a stove in a camper, how many moles of oxygen are consumed?
6. How many moles of H_2O gas are produced when 1.0 moles of O_2 gas are consumed at STP?
7. If 850 mol of CO_2 gas are collected at STP conditions, how many moles of H_2O are produced?
8. 2.000 mol of butane (C_4H_{10}) are burned. How many moles of CO_2 gas are produced?

WS 3: Stoich WS 2

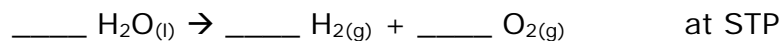
Show your work (conversions) for all stoichiometry problems.

For problems 1-4, use the equation



1. Balance the equation.
2. How many moles of Na_2SO_4 can be made from 0.396 mol NaOH?
3. How many moles of Na_2SO_4 can be made from 1.04 g NaOH?
4. How many grams of H_2O is produced if 150 g of Na_2SO_4 is made?

For problems 5-8, use the equation



5. Balance the equation.
6. If 79 g of H_2 is produced, how many kilograms of O_2 are produced?

7. If 79 particles of H_2O reacts, how many particles of H_2 are made?

8. How many grams of H_2O are needed to make 0.462 mol of O_2 ?

For problems 9-12, use the equation



9. How many mol of Cu can be made if 69.1 g of CuCl_2 are used?

10. What mass of H_2 is needed to make 0.500 mol of HCl?

11. If 810 molecules of H_2 are used, how many atoms of Cu are made?

12. How many g of HCl are produced if 7.23 g of Cu is made?