

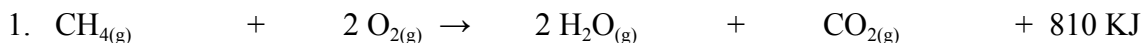
Unit 4 Practice Test - Spring 2026

Complete on binder paper!!

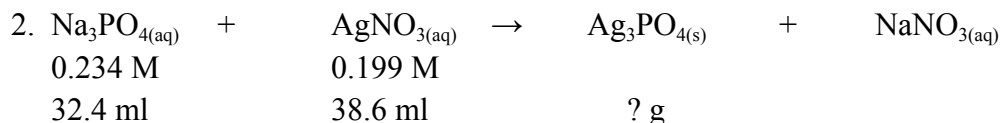
PS #6: Ionic & Covalent Nomenclature & ID a compound as Ionic or Covalent

PS #7: Chemical Rxns -ID rxn type, use solubility rules and balance ME

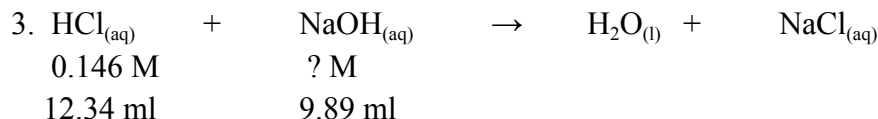
PS #9: Stoichiometry



- If 21.36 grams of methane reacts with 0.534 moles of oxygen gas which reactant will run out first? Prove it by finding and labeling the Start moles, Used moles and Left Over moles.
- Then use the LR to find the moles of water produced.
- Then use the LR to find the grams of carbon dioxide produced.
- Then use the LR to find the amount of energy produced.



- Draw the reactant and product beakers.
- Write the TIE, and circle the spectator ions.
- Write the NIE, and balance the NIE.
- Now find the start moles of each reacting ion from the NIE, and label.
- Now prove the LR by finding the used moles of reacting ions.
- Which ion is left over and how much is left over?
- Which ion is the LR and write that above the NIE.
- Use the LR to find the mass of ppt produced.



- Draw the reactant and product beakers.
- Write the TIE and circle the spectator ions.
- Write the NIE and be sure it is balanced.
- Find the moles of the hydrogen ion.
- Find the moles of hydroxide ions needed to neutralize the hydrogen ions.
- Now find the molarity of the original sodium hydroxide solution.

4. Write the name for the following covalent compounds.

- | | |
|---------------------------|---------------------------|
| a. PCl_3 | d. SCl_6 |
| b. B_2H_6 | e. P_2O_5 |
| c. NBr_3 | f. H_2O |

5. Write the formula for the following covalent compounds.

- | | |
|-------------------------|------------------------|
| a. Nitrogen trifluoride | d. Ammonia |
| b. Carbon monoxide | e. Methane |
| c. Sulfur trioxide | f. Dinitrogen trioxide |

6. Identify each compound as either Ionic (I) or Covalent, then name them.

- | | |
|---------------------------------------|------------------|
| a. CO_2 | e. NO_2 |
| b. $\text{NaC}_2\text{H}_3\text{O}_2$ | f. NH_3 |
| c. $\text{W}(\text{NO}_3)_2$ | g. CH_4 |
| d. AgCl | h. TiC |

7. Will the following compounds dissolve in water?

- | | |
|------------------------------|--|
| a. Na_2CrO_4 | d. AgNO_3 |
| b. $\text{Ba}(\text{OH})_2$ | e. AgOH |
| c. AgCl | f. $\text{Co}(\text{C}_2\text{H}_3\text{O}_2)_2$ |

8. Balance the following molecular equations. Can you identify the type of reaction in each problem on this Practice Test?

