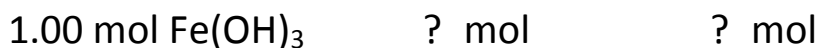
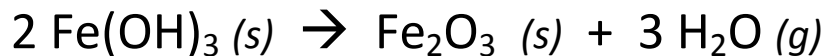
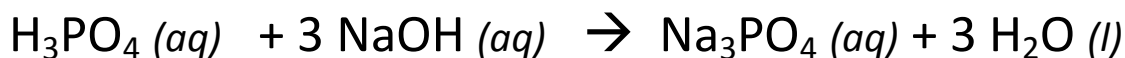


Name: _____

1. How many moles of the products (Fe_2O_3 and H_2O) form in a complete reaction of 1.00 mol $\text{Fe}(\text{OH})_3$?



2. How many moles of product form when 0.0050 mol of H_3PO_4 reacts completely with NaOH ? And how many moles of NaOH are consumed?



3. How many moles of reactants (C_2H_6 and O_2) are required to form 6.25 moles of CO_2 ? How many moles of water are formed?



Name: _____

4. Provide molar masses for the following, with units.

NaCl _____ C₃H₈ _____

O₂ _____ (NH₄)₂SO₄ _____

N₂O₅ _____ Na⁺ _____

5. a. How many moles of P₄O₁₀ in 10.08 grams?

b. How many moles of H₂ (hydrogen gas) in 10.08 grams?

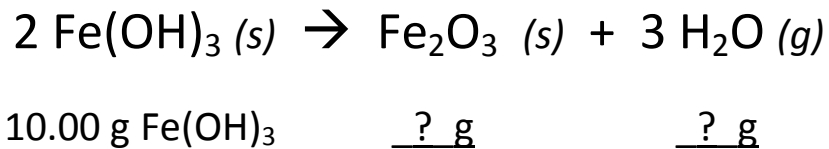
c. How many moles of O₂ (diatomic oxygen gas) in 1.432 g?

d. How many moles of O (oxygen atoms) in 1.432 g?

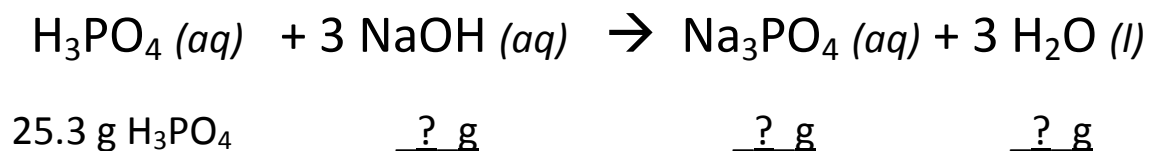
e. How many molecules of water (H₂O) in 1.0 g?

Name: _____

6. How many grams of the products (Fe_2O_3 and H_2O) form in a complete reaction of 10.00 grams $\text{Fe}(\text{OH})_3$?

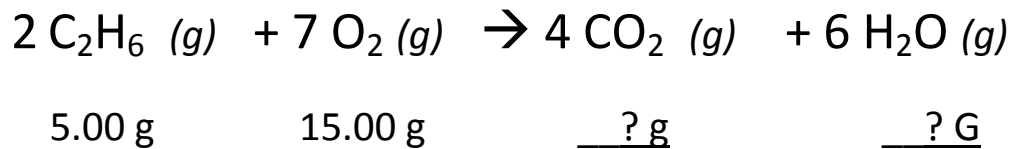


7. How many grams of product form when 25.3 grams of H_3PO_4 reacts completely with NaOH ? And how many grams of NaOH are consumed?



Name: _____

8. Which is the limiting reactant when 5.00 g of C₂H₆ and 15.00 g O₂ are combusted? What is the theoretical yield for CO₂ and water, in grams?



Limiting reactant: _____

CO₂ theoretical yield: _____

Name: _____

9. **Balance** the below equation. What is the **limiting reactant** when 12.0g of propane (C_3H_8) reacts with 30.0 g oxygen? What is the **theoretical yield for CO_2** ? How many grams of **excess reactant** remain?



Limiting reactant: _____

CO_2 theoretical yield: _____

Excess reactant: _____

Name: _____

9. Calculate the **theoretical yield for AgCl** given 15.6 grams of NaCl react with excess AgNO₃. What is the **percent yield** if an experiment produces 23.3 grams of AgCl?



AgCl theoretical yield: _____

AgCl percent yield: _____