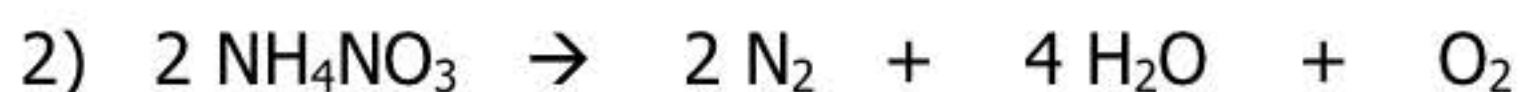
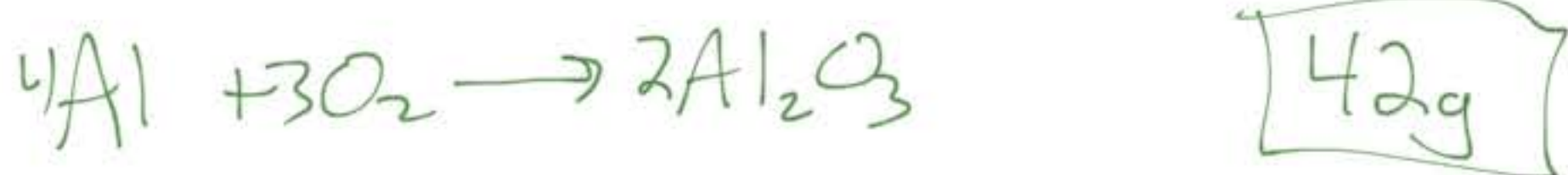


~~Rounded numbers were used~~

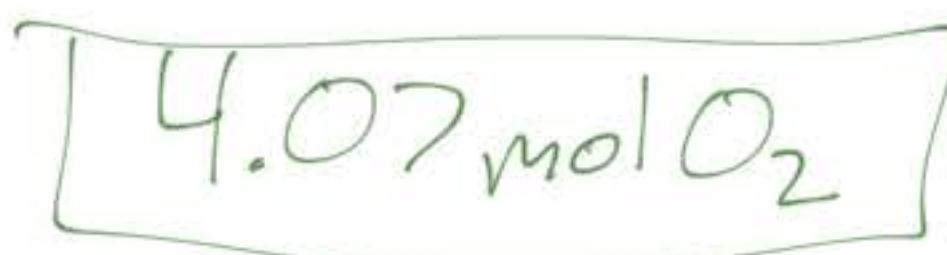
PAP EZPZ Stoich Review

Name: _____ Period: _____

1) Aluminum and oxygen undergo synthesis to produce aluminum oxide. If you start with 0.82 moles of aluminum, how many grams of aluminum oxide will you produce?



How many moles of oxygen gas are produced when 8.14 moles of ammonium nitrate decompose?



A mass of 25.0 g of potassium chlorate is decomposed by heating. How many grams of oxygen can be prepared?

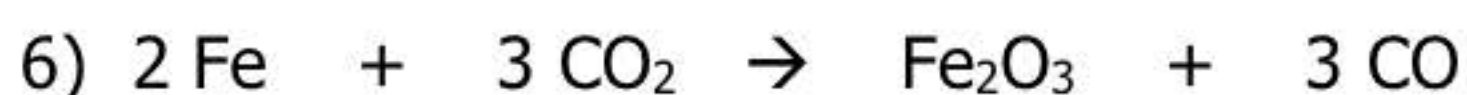


4) In the combustion of methane (CH₄), what mass of O₂ is required to produce 14.5 g of CO₂ if the reaction has a 65.0% yield?

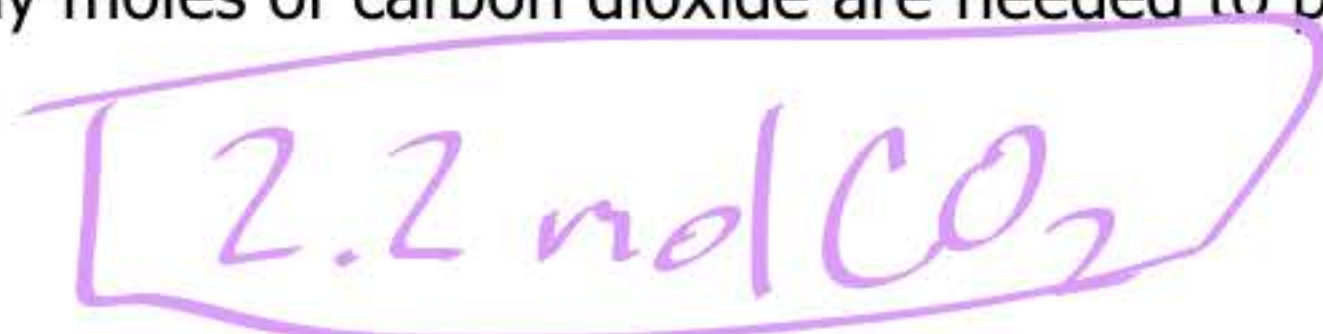


$$\frac{10.54}{.65}$$

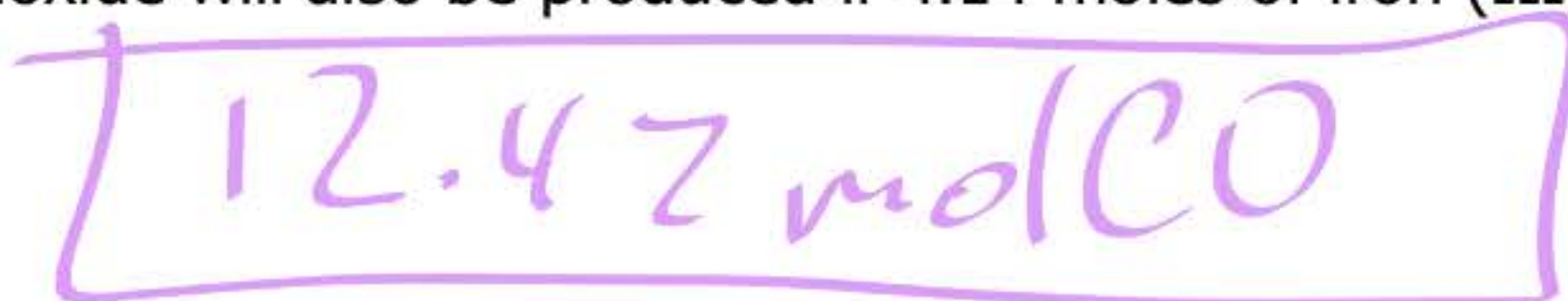
5) Water decomposes into its respective elements. If 47.2 g of H₂O reacts to produce 4.78g of H₂, what is the percent yield of H₂?



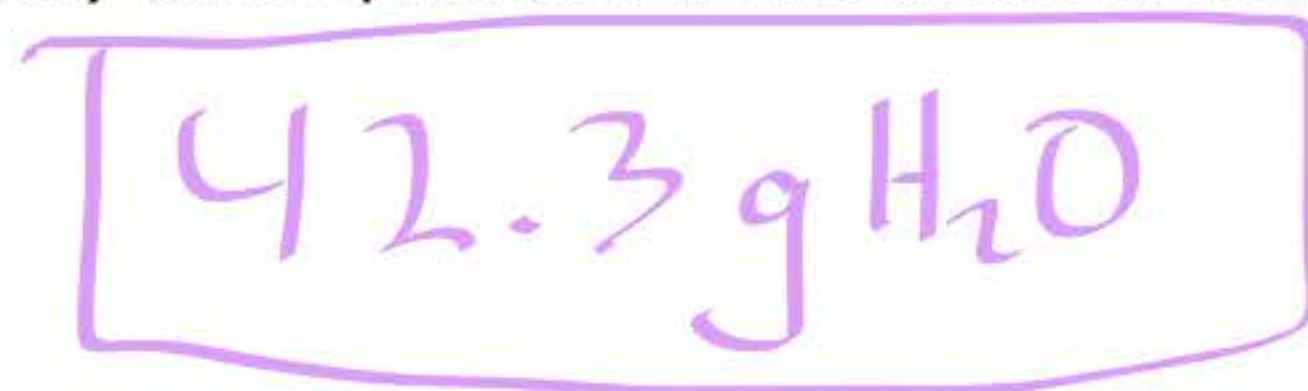
a. How many moles of carbon dioxide are needed to produce 2.2 moles of carbon monoxide?



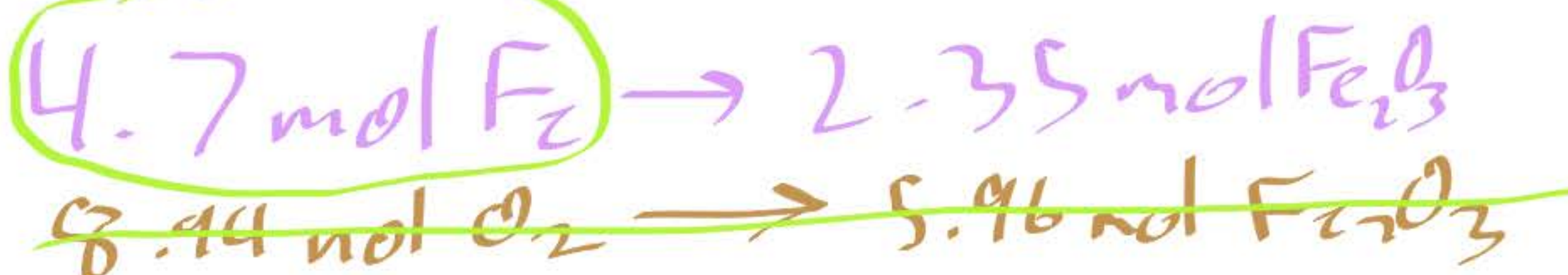
b. How many moles of carbon monoxide will also be produced if 4.14 moles of iron (III) oxide were produced?



How much water in grams (molar mass = 18g/mol) will be produced if 2.35 moles of sodium oxide (molar mass = 62g/mol) are also produced?



What is the limiting reagent when 4.7 mol of iron and 8.94 mol of oxygen react to form iron (III) oxide?





a. How many moles of oxygen are required to produce 34.0 g of carbon dioxide?

1.25 mol O_2

b. If there are 210.32 g of C_4H_{10} , then how many oxygen molecules are needed?

$1.4189 \times 10^{25} \text{ molecules O}_2$

c. How many grams of C_4H_{10} must be burned to produce 1.25 moles of water?

$14.5 \text{ g C}_4\text{H}_{10}$

10) Barium nitrate and potassium carbonate undergo a double replacement reaction.



a. How many moles of barium nitrate are needed to produce with 1.248 moles of barium carbonate?

$1.248 \text{ mol Ba}(\text{NO}_3)_2$

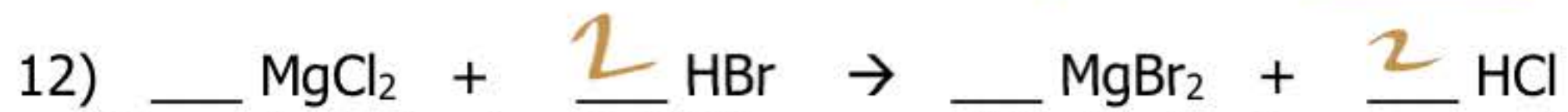
b. How many moles of potassium nitrate will be produced if we start with 0.45 moles of barium nitrate?

0.90 mol KNO_3



If the reaction of 39.2 grams of CaCO_3 produces 10.2 grams of CaO , what is the percent yield?

46.4%

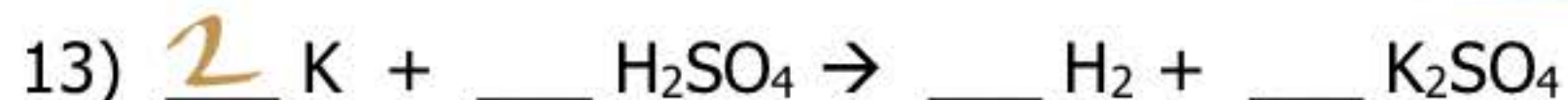


a. If we started out with 3.50 grams of MgCl_2 (molar mass = 95 g/mol) and 10.9 grams of hydrobromic acid, HBr (molar mass = 81g/mol), which reactant would be the limiting reactant?

$\text{MgCl}_2 \text{ is limiting}$

b. How much of the excess reactant will you have left?

$4.93 \text{ g of HBr are left}$



A quantity of potassium reacts with sulfuric acid to produced 0.10 g of hydrogen. How many grams of potassium are required?

3.0 g K



If the reaction of 10.5 grams of BiCl_3 produces 1.79 grams of HCl , what is the percent yield?

49.1%

15) Elemental aluminum and chlorine under synthesis. What is the mass of aluminum chloride (molar mass = 133 g/mol) which could be formed from 15.1 g of Al (molar mass = 27 g/mol) and 33.1 g of Cl_2 (molar mass 71 g/mol)? How much excess reactant remains?



$41.4 \text{ g AlCl}_3 \text{ formed}$

$6.70 \text{ g Al leftover}$