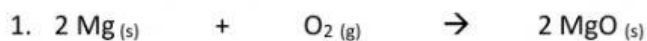NAME: _____

STOICHIOMETRY WORKSHEET
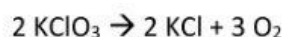
A. Interpret the following reactions in terms of representative particles, moles and mass:

1. $2 \, Mg_{(s)}$ + $O_{2 \, (g)}$ → $2 \, MgO_{(s)}$

    _____   _____   _____
    _____   _____   _____
    _____   _____   _____

2. $2 \, Na_{(s)}$ + $2 \, H_2O_{(aq)}$ → $2 \, NaOH_{(aq)}$ + $H_{2 \, (l)}$

    _____   _____   _____   _____
    _____   _____   _____   _____
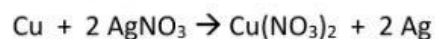   _____   _____   _____   _____

B. Solve the following stoichiometry problems and write the correct answer with units.

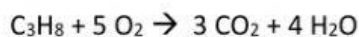1. How many moles of O_2 can be produced by letting 12.00 moles of $KClO_3$ react?

    $2 \, KClO_3 \rightarrow 2 \, KCl + 3 \, O_2$

    Answer:_____

2. How many moles of Cu are needed to react with 3.50 moles of AgNO 3 ?

    $Cu \; + \; 2 \, AgNO_3 \rightarrow Cu(NO_3)_2 \; + \; 2 \, Ag$

    Answer:_____

3. How many moles of CO_2 are produced with 10 mol of C_3H_8 ?

    $C_3H_8 + 5 \, O_2 \rightarrow 3 \, CO_2 + 4 \, H_2O$

    Answer:_____

4. How many moles of HCl can be produced with 5.7 moles of H_2SO_4?

    $2 \, NaCl + H_2SO_4 \; \rightarrow \; Na_2SO_4 \; + \; 2 \, HCl$

    Answer:_____

5. How many moles of Oxygen are needed to make complete combustion of 17.5 moles of propane, C_3H_8, in order to get CO2 and H2O?

    $C_3H_8 \; + \; 5 \, O_2 \rightarrow 3 \, CO_2 + 4 \, H_2O$

    Answer:_____