NAME: _____

STOICHIOMETRY WORKSHEET: Percentage Yield

Solve the following stoichiometry problems and write the correct answer with units. *Round the number to 1 decimal point and remember you need to have balanced equations to work with.*

1. Calculate the indicated quantity (X) for each of the following:
   a. Theoretical yield= 20 g Actual yield= 15 g Percentage yield= X
      ANSWER: _____

   b. Theoretical yield= 1.5 g Actual yield= X g Percentage yield= 90%
      ANSWER: _____

   c. Theoretical yield= 5 g Actual yield= 4.75 g Percentage yield= X
      ANSWER: _____

2. Methanol can be produced through the reaction of CO and H2 in the presence of a catalyst.

   $$CO + 2H_2 \rightarrow CH_3OH$$

   If 75 g of CO react to produce 68.4 g CH_3OH, what is the percentage yield of CH_3OH?
   ANSWER: _____

3. Aluminum reacts with excess Copper (II) Sulfate according to the reaction given below. If 1.85 g ot Al react, and the percentage yield of Cu is 56.6%, what mass of Cu is produced?

   $$2\,Al + 3\,CuSO_4 \rightarrow Al_2(SO_4)_3 + 3Cu$$

   ANSWER: _____

4. Quicklime, CaO, can be prepared by roasting limestone, CaCO3, according to the following reaction:

   $$CaCO_3 \rightarrow CaO + CO_2$$

   When 200 g of CaCO3 are heated, the actual yield of CaO is 105 g. What is the percentage yield?

   ANSWER: _____