## **Quiz 3: Classifying Reactions, Stoichiometry**

1. When calcium hydroxide reacts with hydrofluoric acid, water and calcium fluoride are produced.

 $\underline{\text{Ca}(OH)_2} + \underline{\text{HF}} \rightarrow \underline{\text{H}_2O} + \underline{\text{CaF}_2}$ 

a. Write the balanced chemical equation

b. Classify the type of reaction

c. How many moles of hydrofluoric acid are required to react to produce 1.72 moles of water?

2. A handheld lighter uses butane as its fuel. When butane  $(C_4H_{10})$  is burned in air, it forms carbon dioxide and water.

$$\_C_4H_{10} + \_O_2 \rightarrow \_CO_2 + \_H_2O$$

a. Write the balanced chemical equation

b. Classify the type of reaction

c. If 19.4 moles of oxygen reacted, how many moles of carbon dioxide were produced?