

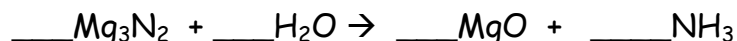
Stoich. Problems

Name _____ Period _____ Date _____

Answer true or false for each of the following:

- _____ 1. Coefficients can represent the number of moles of reactants and products.
- _____ 2. Coefficients can represent the number of grams of reactants and products.
- _____ 3. In the equation $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$; 2 moles of sodium are reacting with 2 moles of chlorine gas.

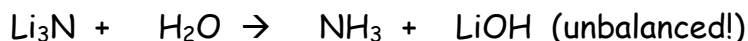
Balance this equation to answer the following questions:



- _____ 1. How many moles of water react with 1 mole of Mg_3N_2 ?
- _____ 2. How many molecules of MgO are produced if 1 molecule of Mg_3N_2 reacts with 3 molecules of H_2O ?
- _____ 3. Name a product in this reaction
(use words, not symbols)
- _____ 4. What type of reaction is this?
- _____ 5. The 3 in Mg_3N_2 is called a what?
- _____ 6. The number in front of H_2O is called a what?

Perform the necessary calculations to solve each of the following problems. Show all work, give units, and round to 4 sig figs!

- (1) John reacted 0.3800 g of lithium nitride with water according to the unbalanced equation below. How many grams of lithium hydroxide was John able to form?



- (2) Kelly measured the mass of a butane lighter and then used it. After extinguishing the flame she again measured the mass and determined that she had used 0.8500 g of butane, C_4H_{10} . How many grams of carbon dioxide had she also produced? (Hint: need a balanced reaction)