

Name: _____

HW4:4 Balancing Chemical Reactions
Mr. Murray, IPC

Assigned: Fri., 11/10 and Mon. , 11/13

Due: Tues., 11/14 and Wed. , 11/15

Period: _____

1. Why do we balance chemical reactions (also known as chemical equations)?
2. Find the molecular mass of: $\text{BeCl}_2 =$
3. Write the following in reaction notation.
 $2\text{Li}_2\text{O} =$ _____
 $3\text{AlF}_3 =$ _____
 $4\text{O}_2 =$ _____
4. Write the following in Reaction Notation:
 $3\text{Li}_2\text{O} =$ _____
 $2\text{AlF}_3 =$ _____
 $5\text{O}_2 =$ _____
5. If 4g of Hydrogen is combined with 32 g of Oxygen, how much water is produced in the reaction?
6. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ True or false: the easiest way to balance this reaction is to remove the 2 next to the first hydrogen.

cstephenmurray.com

Copyright © 2006, C. Stephen Murray

Page 2

7. What coefficient must these molecules have?
A. ____ $\text{CO}_2 = \text{C}_3\text{O}_6$ C. ____ $\text{Fe}_2\text{O}_3 = \text{Fe}_2\text{O}_3$
B. ____ $\text{Li}_2\text{O} = \text{Li}_4\text{O}_2$ D. ____ $\text{Na}_3\text{N} = \text{Na}_{12}\text{N}_4$
8. Name compound A above: _____.
9. Write the balanced ionic compounds for
A. Aluminum Chloride.

B. $\text{Li}^{+1}\text{N}^{3-}$.
10. Give four things that would prove a chemical change occurred?
11. What is exothermic means?
12. Balance the following reactions:

____ $\text{Na} +$ ____ $\text{S} \rightarrow$ ____ Na_2S

____ $\text{Cl}_2 +$ ____ $\text{KBr} \rightarrow$ ____ $\text{KCl} +$ ____ Br_2

____ $\text{Al}_2\text{O}_3 +$ ____ $\text{MgCl}_2 \rightarrow$ ____ $\text{AlCl}_3 +$ ____ MgO