

## 4.3 Chemical Reactions

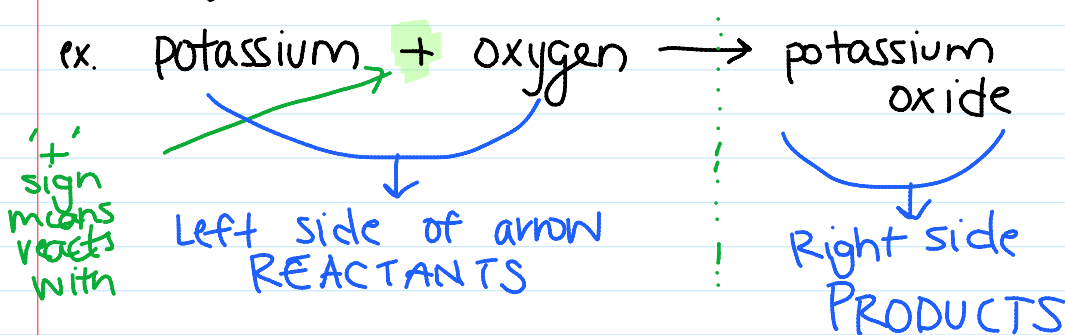
Monday, March 6, 2017  
12:07 PM

### Law of Conservation of Mass

states: "in a chemical reaction, the total mass of the reactants is always equal to the total mass of the products."

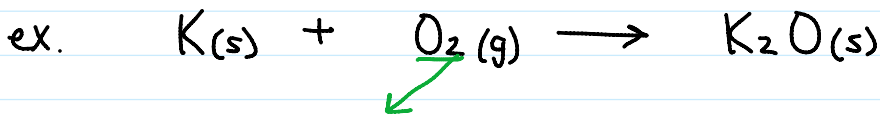
Chemical reactions can be written as:

#### 1. Word Equation - elements/compounds involved.

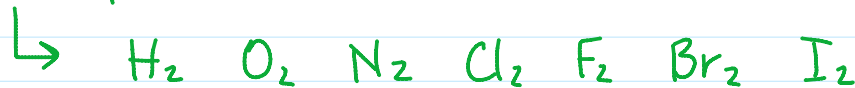


#### 2. Skeleton Equation

- shows the elements/compounds in symbolic form
- shows states of matter (s), (l), (g)
- not balanced



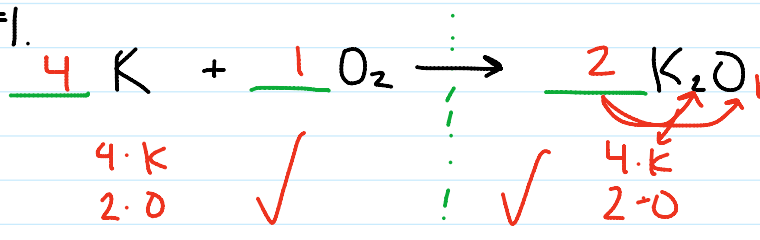
\* 7 special diatomic elements \*



#### 3. Balance Equation

- coefficient (# sits in front of element)
- shows the same # of atoms of each type on each side of the arrow.

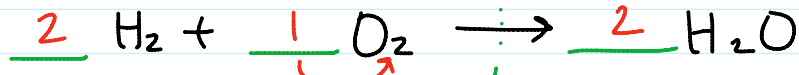
ex. #1.



ex. #2

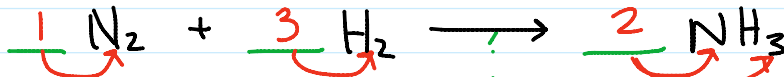
2-0 V | V 2-0

ex. #2



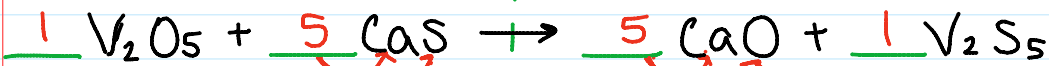
4-H ✓ 4-H ✓  
2-0 ✓ 2-0 ✓

ex. #3



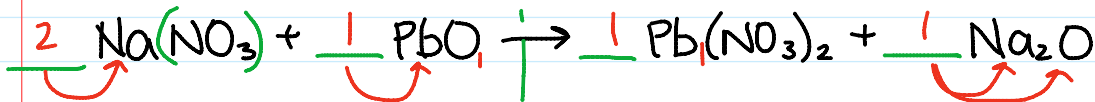
2-N ✓ 2-N ✓  
6-H ✓ 6-H ✓

ex. #4

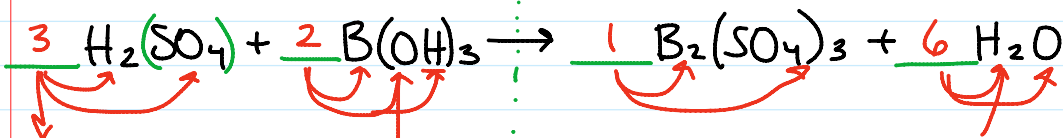


5-S ✓ 5-S ✓  
5-Ca ✓ 5-Ca ✓  
5-O ✓ 5-O ✓  
2-V ✓ 2-V ✓

ex. #5



Ex. #6



6-H 6-O 6-H  
12 total 12-H  
6-O