

*Day3, Unit 7, February 17, 2016*

## **Purpose:**

How do we turn *unbalanced* reactions into *balanced* reactions?

## **WARMUP :**

*“The Law of Conservation of mass says the total mass of a system is the same, before and after any change.”*

### **#1**

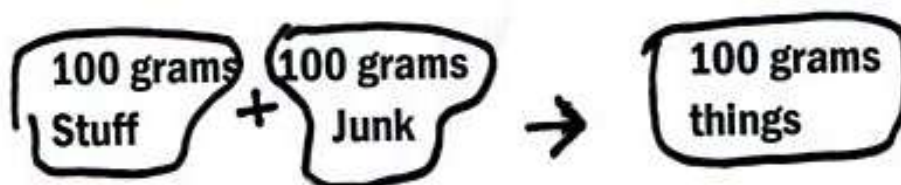
**For the reaction**



**The reactants are the substances on the left of the arrow.**

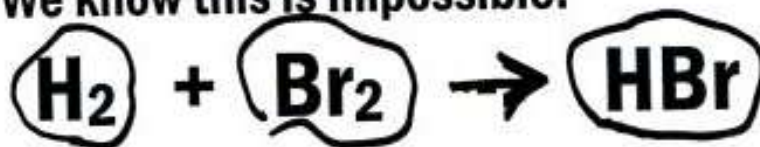
**The products are the substances on the right of the arrow.**

#2 We know this is impossible:



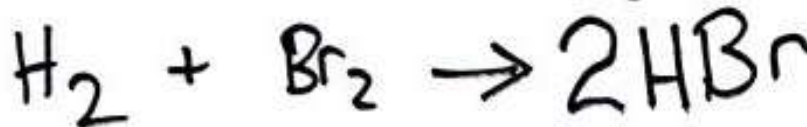
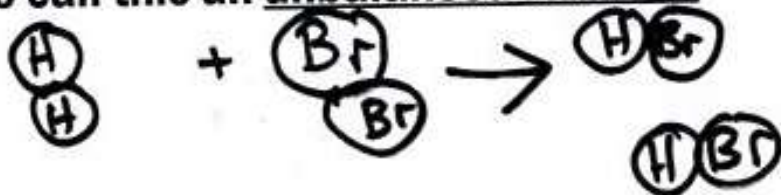
It's impossible because...  
100 + 100 should equal 200.

#3 We know this is impossible:



It's impossible because...  
the number of atoms changed!

We call this an unbalanced reaction



We call this a balanced reaction.

In Balanced Reactions the number of atoms *of each type of element* in the PRODUCTS and REACTANTS are equal.

Writing Unbalanced Reaction Equations

Chemistry: <http://genest.weebly.com>

Stop in for help every day at lunch and Tues & Thurs after school!



Miles Davis

Name  
Period

ANSWERS

Write the unbalanced equations for the following chemical reactions.  
Write formulas (like H<sub>2</sub>O) and phases (like s, l, g, aq):

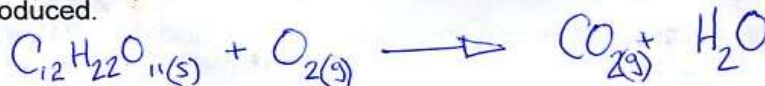
- 1) When dissolved barium chloride reacts with dissolved potassium sulfate in water, barium sulfate precipitate and aqueous potassium chloride are made.



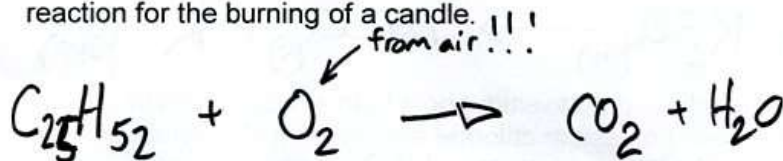
- 2) When calcium chloride and potassium phosphate are dissolved in water they react to form aqueous potassium chloride and calcium phosphate powder.



- 3) When sucrose (C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>) burns in oxygen, carbon dioxide, water and heat are produced.



- 8) With the help of question #2 from yesterday, write an unbalanced chemical reaction for the burning of a candle.



~~SKIP~~ SKIP

Write the unbalanced equations for the following chemical reactions.  
Write formulas (like H<sub>2</sub>O) and phases (like s, l, g, aq):

- 9) When dissolved calcium hydroxide reacts with sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), a precipitate of calcium sulfate, water, and heat are formed.



- 10) When sodium metal reacts with iron (III) chloride, iron metal and sodium chloride are formed.



