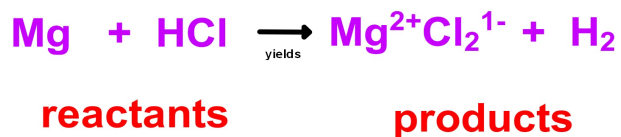


**Standard 4:**  
Use **balanced chemical equations**  
and the mole concept to  
determine the quantities  
of  
**reactants and products.**

Page 1

## Chemical Equation



What are the representative  
particles of reactants  
and products?

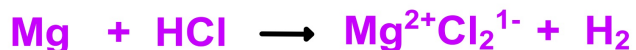
Page 2

## Diatomic molecules

Some atoms don't exist as "free"  
individual atoms - they exist  
(when they are elements) as  
**DIATOMIC MOLECULES**  
instead. Here they are:

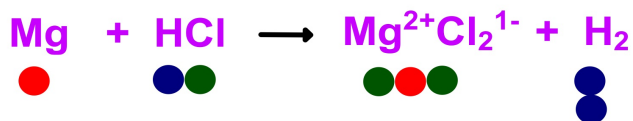
MEMORIZE this list!

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Law of Conservation of Mass

Page 4



Count how many atoms/ions  
for each atom type and  
adjust **coefficients** so that  
total number is same on  
each side of equation.

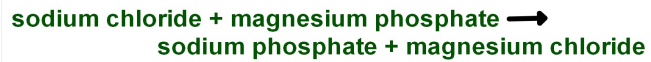
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## Coefficients

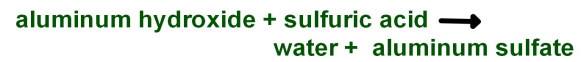
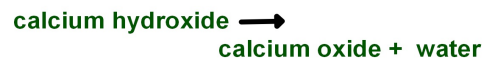
- Lowest common factor
- For now, use the coefficient "1" so we know you actually have balanced the equation.

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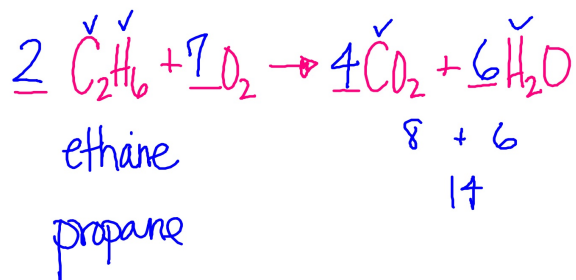
**Write and balance these equations:**



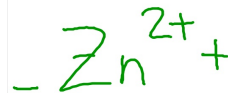
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