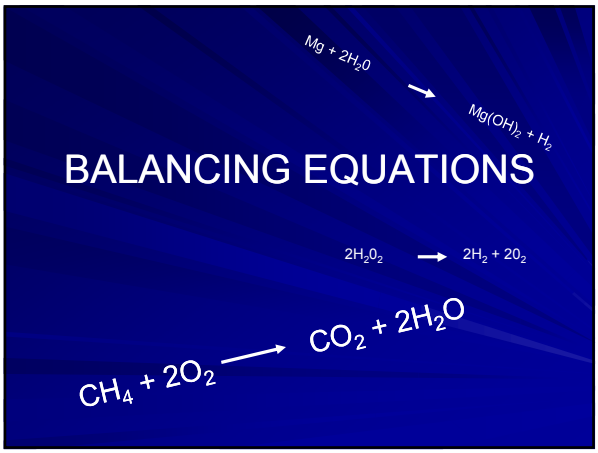


QUIZ 10

WE BALANCE CHEMICAL EQUATIONS BECAUSE MASS MUST BE CONSERVED

- MATTER CANNOT BE CREATED NOR DESTROYED
- ATOMS ARE NOT GAINED OR LOST DURING A CHEMICAL EQUATION
- THERE **MUST** BE THE SAME NUMBER OF ATOMS ON EACH SIDE OF AN EQUATION!

DON'T CHANGE THE SUBSCRIPTS!

- YOU CANNOT ADD OR SUBTRACT SUBSCRIPTS

$OF_2 \rightarrow O_2 + F_2$

$OF_2 \rightarrow O_2 + F_2$

- YOU MUST ADD COEFFICIENTS IN FRONT OF THE CHEMICAL FORMULAS

$OF_2 \rightarrow O_2 + F_2$

$2OF_2 \rightarrow O_2 + 2F_2$

COEFFICIENTS MULTIPLY!

- YOU MUST ADD COEFFICIENTS IN FRONT OF THE CHEMICAL FORMULAS

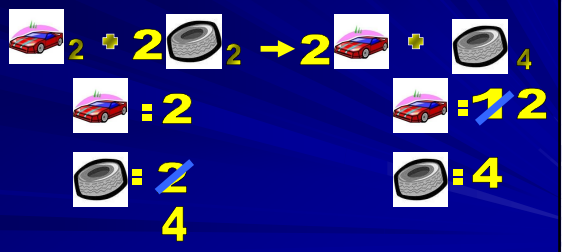
$OF_2 \rightarrow O_2 + F_2$

$2OF_2 \rightarrow O_2 + 2F_2$

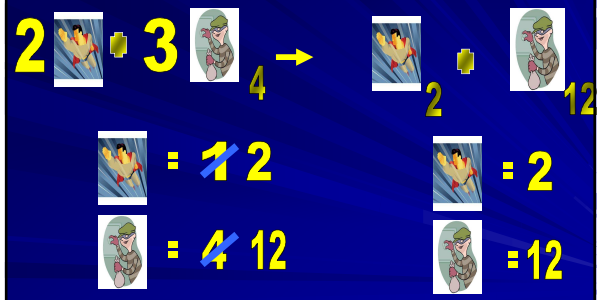
STEPS TO BALANCING AN EQUATION

1. DETERMINE # OF ATOMS FOR EACH ELEMENT
2. PICK AN ELEMENT NOT EQUAL
3. ADD A COEFFICIENT IN FRONT OF THE FORMULA WITH THAT ELEMENT AND ADJUST YOUR COUNTS
4. CONTINUE ADDING COEFFICIENTS TO GET THE SAME NUMBER OF ATOMS OF EACH ELEMENT ON EACH SIDE

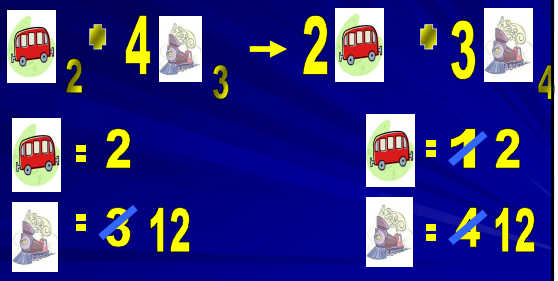
GO TO THE BOARDS
BALANCE THE FOLLOWING



BALANCE THE FOLLOWING



BALANCE THE FOLLOWING



NUMBER OF ATOMS MUST BE EQUAL ON BOTH SIDES

- THE NUMBER OF EACH ELEMENT MUST BE THE SAME ON BOTH SIDES

Unbalanced Reaction

REACTANTS	PRODUCTS
$Li + O_2$	$\longrightarrow Li_2O$

Unbalanced Reaction

REACTANTS	PRODUCTS
$Li + O_2$	$\longrightarrow Li_2O$

Balanced Reaction

REACTANTS	PRODUCTS
$4Li + O_2$	$\longrightarrow 2Li_2O$

EXPANDING COMPOUNDS

$3MgCl_2$

BeO

$5Li_2O$

REACTION NOTATION

$3MgCl_2$

BeO

$5Li_2O$

BE PATIENT

- WHEN BALANCING SOME CHEMICAL EQUATIONS, YOU MAY HAVE TO CHANGE THE COEFFIENCIENTS SEVERAL TIMES
- WHEN ONE ELEMENT BECOMES BALANCED, ANOTHER MAY BECOME UNBALANCED
- BE PATIENT AND EVENTUALLY YOU WILL SUCCEED

Balancing Practice

___H_2 + ___O_2 ⟶ ___H_20

___H_2 + ___N_2 ⟶ ___HN_3

___KClO ⟶ ___KCl + ___O_2

___ZnS + ___O_2 ⟶ ___ZnO + ___SO_2

HOMEWORK

- BALANCING CHEMICAL EQUATIONS
  - DUE NEXT CLASS PERIOD
- NEXT CLASS
  - BALANCING CHEMICAL EQUATIONS LAB