$\qquad$

1. What number represent the Coefficient?
2. What number represents the Subscript?
3. What element is represented by the letter " $S$ "? $\qquad$ $5 \mathrm{SF}_{6}$
4. How many "S's" do you have?
5. What element is represent by the letter " $F$ "?
6. How many "F's" do you have?

## Table 1:

| \# | MAKE THE FOLLOWING EQUATIONS ON YOUR WHITE BOARDS | Reactants | Products | Balanced Equation |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $\mathrm{H}_{2}+\mathrm{O}_{2}-->\mathrm{H}_{2} \mathrm{O}$ |  |  |  |
| 2 | $\mathrm{H}_{2} \mathrm{O}_{2}-->\mathrm{H}_{2} \mathrm{O}+\mathrm{O}_{2}$ |  |  |  |
| 3 | $\mathrm{Na}+\mathrm{O}_{2}-->\mathrm{Na}_{2} \mathrm{O}$ |  |  |  |
| 4 | $\mathrm{N}_{2}+\mathrm{H}_{2}-->\mathrm{NH}_{3}$ |  |  |  |
| 5 | $\mathrm{P}_{4}+\mathrm{O}_{2}--\mathrm{P}_{4} \mathrm{O}_{10}$ |  |  |  |
| 6 | $\mathrm{Fe}+\mathrm{H}_{2} \mathrm{O}-->\mathrm{Fe}_{3} \mathrm{O}_{4}+\mathrm{H}_{2}$ |  |  |  |
| 7 | $\mathrm{C}+\mathrm{H}_{2}--\mathrm{CH}_{4}$ |  |  |  |
| 8 | $\mathrm{Na}_{2} \mathrm{SO}_{4}+\mathrm{CaCl}_{2}-->\mathrm{CaSO}_{4}+\mathrm{NaCl}$ |  |  |  |
| 9 | $\mathrm{C}_{2} \mathrm{H}_{6}+\mathrm{O}_{2}-->\mathrm{CO}_{2}+\mathrm{H}_{2} \mathrm{O}$ |  |  |  |
| 10 | $\mathrm{Al}_{2} \mathrm{O}_{3}-->\mathrm{Al}+\mathrm{O}_{2}$ |  |  |  |

## Analysis/Results:

1. What does "-->" mean?
2. What side of the equation are the reactants found? products?
3. Why must all chemical equations be balanced?
4. Why can't the subscripts be changed?
5. What does it mean to "simplify" the equation?

## Balance the following Reactions:

1. $\qquad$ $\mathrm{AlBr}_{3}+$ $\qquad$ $K \rightarrow$ $\qquad$ $\mathrm{KBr}+$ $\qquad$ Al
2. $\qquad$ $\mathrm{LiCl}+$ $\qquad$ $\mathrm{Br}_{2} \rightarrow$ $\qquad$ $\mathrm{LiBr}+$ $\qquad$ $\mathrm{Cl}_{2}$
3. $\qquad$ $\mathrm{Mn}+$ $\qquad$ $\mathrm{HI} \rightarrow$ $\qquad$ $\mathrm{H}_{2}+$ $\qquad$ $\mathrm{Mnl}_{3}$
4. $\qquad$ $\mathrm{P}_{4}+$ $\qquad$ $\mathrm{Br}_{2} \rightarrow$ $\qquad$ $\mathrm{PBr}_{3}$
5. $\qquad$ $\mathrm{Na}_{3} \mathrm{P}+$ $\qquad$ $\mathrm{CaF}_{2} \rightarrow$ $\qquad$ $\mathrm{NaF}+$ $\qquad$ $\mathrm{Ca}_{3} \mathrm{P}_{2}$
