## Physical Science <br> Balancing Chemical Equations \#1

Name: $\qquad$ Block: $\qquad$

Check to see if the equations below are balanced. If an equation is balanced, write "balanced" next the equation and you are finished with that number.

If an equation is not balanced, insert coefficients that will balance the equation. Do this by following the directions below.

1. Identify and count the number of each type of atom on the reactant side and then the product side.
2. Determine which elements need to be balanced.
3. Beginning with the element that seems the easiest to balance, insert the appropriate coefficient.
4. Re-count the number of each type of atom.
5. Repeat steps 2, 3 and 4 until the entire equation is balanced.

Note: Sometime you will have to place a coefficient on both sides to balance a single element

1. $\qquad$ $\mathrm{HgO} \rightarrow$ $\qquad$ $\mathrm{Hg}+$ $\qquad$ $\mathrm{O}_{2}$
$\mathrm{Hg}=$ $\mathrm{Hg}=$
$\mathrm{O}=$
$\mathrm{O}=$
2. $\qquad$ $\mathrm{BaCl}_{2} \rightarrow$ $\qquad$ $\mathrm{Ba}+\ldots \mathrm{Cl}_{2}$
$\mathrm{Ba}=$
$\mathrm{Ba}=$
$\mathrm{Cl}=$
$\mathrm{Cl}=$
3. $\qquad$ $\mathrm{Li}+$ $\qquad$ $\mathrm{Cl}_{2} \rightarrow$ $\qquad$ LiCl $\mathrm{Li}=$ $\mathrm{Li}=$ $\mathrm{Cl}=$ $\mathrm{Cl}=$
4. $\qquad$ $\mathrm{O}_{2}+$ $\qquad$ $\mathrm{Cl}_{2} \rightarrow$ $\qquad$ $\mathrm{OCl}_{2}$
$\mathrm{O}=$
$\mathrm{O}=$
$\mathrm{Cl}=$
$\mathrm{Cl}=$
5. 

$$
\begin{array}{lc}
\sum_{\mathrm{S}=} \mathrm{S}+\ldots & \mathrm{O}_{2} \rightarrow \\
\mathrm{O}= & \mathrm{SO}_{3} \\
\mathrm{O}=
\end{array}
$$

6. $\quad \mathrm{NO}+\ldots \mathrm{O}_{2} \rightarrow \quad \mathrm{NO}_{2}$
$\mathrm{N}=$
$\mathrm{N}=$
$\mathrm{O}=\quad \mathrm{O}=$
7. $\quad \mathrm{Zn}+\ldots \quad \mathrm{HCl} \rightarrow$ $\mathrm{HCl} \rightarrow$ $\ldots \mathrm{ZnCl}_{2}+$ $\qquad$ $\mathrm{H}_{2}$ $\mathrm{Zn}=$ $\mathrm{Zn}=$
$\mathrm{H}=$
$\mathrm{H}=$
$\mathrm{Cl}=$
$\mathrm{Cl}=$
