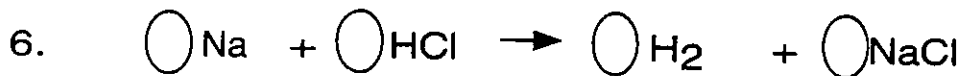# Balancing Act

Add <u>coefficients</u> to balance each equation. Be sure to show your lists!

1. ◯Na + ◯MgF$_2$ → ◯NaF + ◯Mg

2. ◯Mg + ◯HCl → ◯MgCl$_2$ + ◯H$_2$

3. ◯Cl$_2$ + ◯KI → ◯KCl + ◯I$_2$

4. ◯NaCl → ◯Na + ◯Cl$_2$

5. ◯Na + ◯O$_2$ → ◯Na$_2$O

6. ◯Na + ◯HCl → ◯H$_2$ + ◯NaCl

7. ◯K + ◯Cl$_2$ → ◯KCl
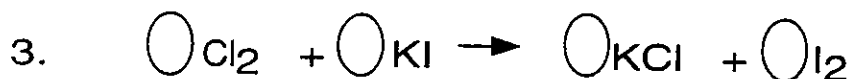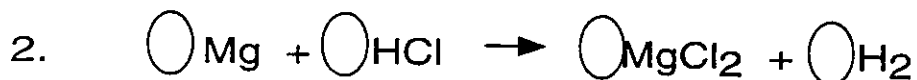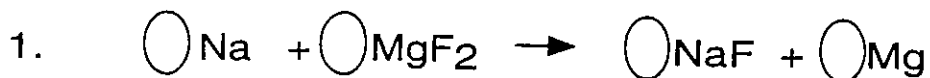
Challenge: This one is tough!
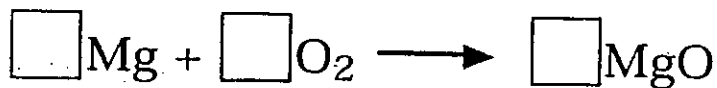
◯CO$_2$ + ◯H$_2$O → ◯C$_6$H$_{12}$O$_6$ + ◯O$_2$

Balancing Act

Atoms are not _____ or _____ during a chemical reaction. Scientist know that there must be the _____ number of atoms on each _____ of the _____. To balance the chemical equation, you must add _____ to the different parts of the equation.
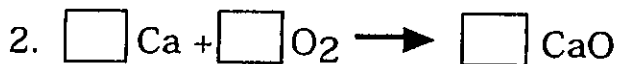
1) Determine number of atoms for each element.

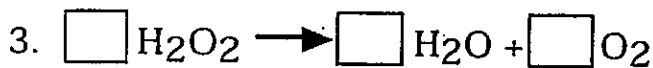2) Try to add <u>coefficients</u> to the equation to get the same number of atoms on each side.

$$\Box Mg + \Box O_2 \longrightarrow \Box MgO$$

Mg =

O =

Mg =

O =

Try these:

2. $\Box Ca + \Box O_2 \longrightarrow \Box CaO$

Ca =

O =

Ca =

O =

3. $\Box H_2O_2 \longrightarrow \Box H_2O + \Box O_2$

H =

O =

H =

O =

4. $\Box N_2 + \Box H_2 \longrightarrow \Box NH_3$

N =

H =

N =

H =

5. $\Box Cu_2O + \Box C \longrightarrow \Box Cu + \Box CO_2$

Cu =

O =

C =

Cu =

O =

C =