LO: Students will be able to balance chemical equations.

DOL: Students will be able to correctly balance at least 4/5 chemical equations.

Find the molar mass of each of the following compounds.

$$
\underset{\text { reactants }}{2 \mathrm{H}_{2}+\mathrm{O}_{2}} \longrightarrow \underset{\text { products }}{2 \mathrm{H}_{2} \mathrm{O}}
$$

Multiply each molar mass by the number in front of it. What do you notice about the total masses on each side of the arrow? Compare the masses of the reactants to the products...

Chemical equations must be balanced before you can do anything with them.

Coefficients represent the molar ratios of the compounds in an equation.

You must have the same number of mols of EACH element in order to be balanced.

## Using a table to balance an equation:

$$
\mathrm{H}_{2} \mathrm{SO}_{4}+\mathrm{NaOH} \longrightarrow \mathrm{H}_{2} \mathrm{O}+\mathrm{Na}_{2} \mathrm{SO}_{4}
$$

Leave about 6 lines blank in your notebook to work this out in class

## Potassium reacts with water yielding potassium hydroxide and hydrogen.

Leave about 6 lines blank in your notebook to work this out in class

## Balance the equation.

Al
$+$
$\mathrm{N}_{2} \rightarrow$
AlN

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## Balance the equation.

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## Balance the equation. <br>  <br> $$
\mathrm{KI}+\mathrm{Cl}_{2} \rightarrow \mathrm{KCl}+\mathrm{I}_{2}
$$

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## Balance the equation.



$$
\mathrm{BaO}_{2} \rightarrow \mathrm{BaO}+\mathrm{O}_{2}
$$

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## Balance the equation. <br> 0 0:04:00

$\mathrm{Al}+\mathrm{H}_{2} \mathrm{SO}_{4} \rightarrow \mathrm{Al}_{2}\left(\mathrm{SO}_{4}\right)_{3}+\mathrm{H}_{2}$

Leave about 6 lines blank in your notebook to work this out in class

## Balance the equation.



$$
\mathrm{CH}_{4}+\mathrm{Cl}_{2} \rightarrow \mathrm{CHCl}_{3}+\mathrm{HCl}
$$

Leave about 6 lines blank in your notebook to work this out in class

