

## Converting Word Equations to Formulaic Equations (Podcasts Chemical Reactions 1, 2, 3); SC2a

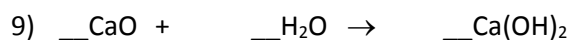


Write each of the following equations using chemical symbols and all other appropriate symbols. Remember to put state of matter in parenthesis and subscripted.

1. Iron is heated in the presence of solid sulfur to form solid iron III sulfide
2. Gaseous methane  $\text{CH}_4$  is reacted with oxygen gas to form carbon dioxide gas and water vapor
3. Aqueous copper II chloride is added to aqueous lead II nitrate to form solid lead II chloride and aqueous copper II nitrate
4. Chlorine gas is bubbled into aqueous sodium bromide to form aqueous sodium chloride and liquid bromine
5. Solid silver is added to aqueous gold III chloride to form solid gold and silver I chloride.
6. Gaseous ammonia ( $\text{NH}_3$ ) is bubbled into water to form aqueous ammonium hydroxide

### Balancing Chemical Equations (Balance the following equations)

- 1)  $\text{__HgO} \rightarrow \text{__Hg} + \text{__O}_2$
- 2)  $\text{__HCl} + \text{__Mg} \rightarrow \text{__H}_2 + \text{MgCl}_2$
- 3)  $\text{__CH}_4 + \text{__O}_2 \rightarrow \text{__CO}_2 + \text{__H}_2\text{O}$
- 4)  $\text{__C}_6\text{H}_{12}\text{O}_6 + \text{__O}_2 \rightarrow \text{__CO}_2 + \text{__H}_2\text{O}$
- 5)  $\text{__H}_2 + \text{__O}_2 \rightarrow \text{__H}_2\text{O}$



10) Hydrogen gas reacts with iodine to produce hydroiodic acid.

11) Sulfur reacts with oxygen to produce sulfur dioxide.

12) Calcium acetate reacts with sodium carbonate to produce calcium carbonate and sodium acetate.

13) Iron combines with oxygen and water to form iron (III) hydroxide

14) Sulfur trioxide is bubbled through water to produce sulfuric acid

15) Copper-bottomed cooking pans turn black because copper combines with oxygen to form copper (II) oxide.

16) Magnesium hydroxide neutralizes stomach acid, HCl, to produce magnesium chloride and water.

### Podcast Chemical Reactions 3:

Now go back through the above equations and reactions and write down the *specific type* of each reaction. You learned this in Chemical Reactions Podcast #3.