

Name _____ Section _____ Date _____

Balancing Symbolic Equations

While balancing equations, take into consideration the following:

1. **Never change the formula and the subscripts in a formula.**
2. Remember the seven **diatomic molecules are always written as H₂, N₂, O₂, F₂, Cl₂, Br₂, I₂**. **Balance the atoms** on either side of the equation by **changing the coefficients**. You can use the mnemonic "BrINClHOF" (Sonds like: "Brinkelhoff")
3. Make sure the **coefficients are the smallest set of a whole number**.

Now try balancing these equations:

1. $\text{Cu} + \text{O}_2 \longrightarrow \text{CuO}$
2. $\text{S}_8 + \text{F}_2 \longrightarrow \text{SF}_6$
3. $\text{P}_4\text{O}_{10} + \text{H}_2\text{O} \longrightarrow \text{H}_3\text{PO}_4$
4. $\text{ZnS} + \text{HCl} \longrightarrow \text{ZnCl}_2 + \text{H}_2\text{S}$
5. $\text{C}_5\text{H}_{12} + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
6. $\text{C}_2\text{H}_5\text{OH} + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
7. $\text{NH}_3 + \text{O}_2 \longrightarrow \text{NO} + \text{H}_2$
8. $\text{Fe}_2\text{S}_3 + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3 + \text{SO}_2$
9. $\text{C}_6\text{H}_6 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$