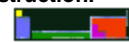


Revised August 2012



HONORS WORKSHEET 4a: Balancing Equations I



Balance the following equations using the **lowest possible integers**. (20)

- $\text{N}_2 + \text{O}_2 \rightarrow \text{N}_2\text{O}$
- $\text{H}_3\text{PO}_3 + \text{NaOH} \rightarrow \text{Na}_3\text{PO}_3 + \text{H}_2\text{O}$
- $\text{Na} + \text{Al}_2\text{O}_3 \rightarrow \text{Na}_2\text{O} + \text{Al}$
- $\text{Cs} + \text{O}_2 \rightarrow \text{Cs}_2\text{O}_2$
- $\text{Fe} + \text{Cl}_2 \rightarrow \text{FeCl}_3$
- $\text{HCl} + \text{LiOH} \rightarrow \text{LiCl} + \text{H}_2\text{O}$
- $\text{N}_2 + \text{O}_2 \rightarrow \text{N}_2\text{O}_5$
- $\text{C}_5\text{H}_{10} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- $\text{Mg} + \text{N}_2 \rightarrow \text{Mg}_3\text{N}_2$
- $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$
- $\text{MgCO}_3 + \text{HNO}_3 \rightarrow \text{Mg}(\text{NO}_3)_2 + \text{H}_2\text{O} + \text{CO}_2$
- $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}_2$
- $\text{NaOH} + \text{Cl}_2 \rightarrow \text{NaClO} + \text{NaCl} + \text{H}_2\text{O}$
- $\text{Al}(\text{OH})_3 + \text{H}_2\text{SO}_3 \rightarrow \text{Al}_2(\text{SO}_3)_3 + \text{H}_2\text{O}$
- $\text{LiOH} + \text{H}_2\text{CO}_3 \rightarrow \text{Li}_2\text{CO}_3 + \text{H}_2\text{O}$
- $\text{Li} + \text{Cl}_2 \rightarrow \text{LiCl}$
- $\text{AgNO}_3 + \text{MgCl}_2 \rightarrow \text{AgCl} + \text{Mg}(\text{NO}_3)_2$
- $\text{H}_3\text{PO}_4 + \text{Mg}(\text{OH})_2 \rightarrow \text{Mg}_3(\text{PO}_4)_2 + \text{H}_2\text{O}$
- $\text{P}_4\text{O}_{10} + \text{H}_2\text{O} \rightarrow \text{H}_3\text{PO}_4$
- $\text{NaOH} + \text{HBr} \rightarrow \text{NaBr} + \text{H}_2\text{O}$