

**SCH 4C Balancing Quiz #2**

Balance each equation by adding stoichiometric coefficients before each compound or element. Use pencil!

1.  $2\text{Hg}_2\text{O} \rightarrow 4\text{Hg} + \text{O}_2$
2.  $\text{Mg} + \text{Cl}_2 \rightarrow \text{MgCl}_2$
3.  $2\text{Se}_2\text{O}_5 + 10\text{Cl}_2 \rightarrow 4\text{SeCl}_5 + 5\text{O}_2$
4.  $2\text{FeCl}_3 + 3\text{Na}_2\text{SO}_4 \rightarrow \text{Fe}_2(\text{SO}_4)_3 + 6\text{NaCl}$
5.  $2\text{C}_8\text{H}_{18} + 25\text{O}_2 \rightarrow 16\text{CO}_2 + 18\text{H}_2\text{O}$

Complete each synthesis reaction:

6.  $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$
7.  $\text{Ga}_2\text{O}_3 + 3\text{H}_2\text{O} \rightarrow 2\text{Ga}(\text{OH})_3$

Complete each decomposition reaction:

8.  $\text{K}_2\text{CO}_3 \rightarrow \text{K}_2\text{O} + \text{CO}_2$
9.  $2\text{Ag}_3\text{N} \rightarrow 6\text{Ag} + \text{N}_2$

Complete each single replacement reaction:

10.  $2\text{Sc} + \text{Fe}_2\text{S}_3 \rightarrow \text{Sc}_2\text{S}_3 + 2\text{Fe}$
11.  $2\text{Al}_2\text{O}_3 + 6\text{Br}_2 \rightarrow 4\text{AlBr}_3 + 3\text{O}_2$

Complete each double replacement reaction:

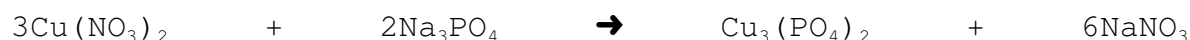
12.  $\text{MgO} + \text{Ba}(\text{ClO}_3)_2 \rightarrow \text{Mg}(\text{ClO}_3)_2 + \text{BaO}$
13.  $3(\text{NH}_4)_2\text{CO}_3 + 2\text{AlCl}_3 \rightarrow 6\text{NH}_4\text{Cl} + \text{Al}_2(\text{CO}_3)_3$

Write balanced chemical equations for each word description:

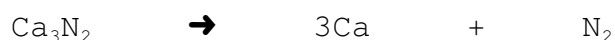
14. the combustion of the hydrocarbon pentane with the chemical formula of  $\text{C}_5\text{H}_{12}$



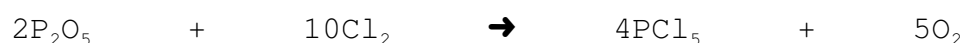
15. the double displacement reaction between copper(II) nitrate with sodium phosphate



16. the decomposition of calcium nitride



17. the single replacement reaction between phosphorus(V) oxide and chlorine gas



18. the synthesis of barium hydroxide from barium oxide plus a common substance

