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## SCH 4C Balancing Quiz #1

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

1. 
$$Al_2O_3$$
  $\rightarrow$   $Al$  +  $O_2$ 

2. Ca + 
$$Br_2 \rightarrow CaBr_2$$

3. 
$$GaCl_3$$
 +  $O_2$   $\rightarrow$   $Ga_2O_3$  +  $Cl_2$ 

4. 
$$Na_2SO_4$$
 +  $Al(NO_3)_3$   $\rightarrow$   $Al_2(SO_4)_3$  +  $NaNO_3$ 

5. 
$$C_6H_{14} + O_2 \rightarrow CO_2 + H_2O$$

Complete each synthesis reaction:

6. Ba + 
$$N_2$$
  $\rightarrow$ 

7. 
$$Na_2O$$
 +  $CO_2$   $\rightarrow$ 

Complete each decomposition reaction:

8. Ba(OH)<sub>2</sub> 
$$\rightarrow$$

9. 
$$Au_2O_3$$

Complete each single replacement reaction:

10. Ca + Au(CN)
$$_6$$
  $\rightarrow$ 

11. 
$$Zn_3N_2$$
 +  $Cl_2$ 

Complete each double replacement reaction:

12. 
$$CaCl_2$$
 +  $AgNO_3$   $\rightarrow$ 

13. Al(ClO<sub>3</sub>)<sub>3</sub> + Na<sub>2</sub>SO<sub>4</sub> 
$$\rightarrow$$

Write balanced chemical equations for each word description:

- 14. the combustion of the hydrocarbon propane with the chemical formula of  $C_3H_8\,$
- 15. the double displacement reaction between  $\operatorname{gold}(\operatorname{III})$  chloride with hydrogen carbonate
- 16. the decomposition of scandium sulphide
- 17. the single replacement reaction between antimony(V) chloride and oxygen gas
- 18. the synthesis of calcium carbonate from calcium oxide plus a common gas