## Predict the products, and balance each reaction.

Use the reaction type as a hint. Use your *oxidation chart* to help in writing product formulas correctly. *The compound formulas must be written correctly before attempting to balance.* 

## Synthesis

- 1. \_\_\_\_Mg + \_\_\_\_F\_2 \rightarrow
- $2. \underline{Zn} + \underline{F_2} \rightarrow$
- 3. <u>Ba</u> + <u>O</u><sub>2</sub>  $\rightarrow$
- 4. <u>Li</u> + <u>Br</u><sub>2</sub>  $\rightarrow$
- 5. <u>Ca</u> + <u>Cl</u><sub>2</sub>  $\rightarrow$
- 6. Na +  $F_2 \rightarrow$
- 7. \_\_\_\_K + \_\_\_Cl<sub>2</sub>  $\rightarrow$
- 8. \_\_\_Ca + \_\_\_CO→
- 9.  $Mg + O_2 \rightarrow$

10. \_\_\_\_Ag + \_\_\_\_O<sub>2</sub>  $\rightarrow$ 

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**Single Replacement** - Remember the cation has to replace another atom with a positive charge. Anion replaces the other negative.

1.  $_Zn + _AgNO_3 \rightarrow$ 2. \_\_\_\_Ag + \_\_\_\_H\_2SO<sub>4</sub>  $\rightarrow$ 3. \_\_\_\_AI + \_\_\_\_H\_3PO\_4  $\rightarrow$ 4. \_\_\_\_AI + \_\_\_\_Ag\_2SO\_4  $\rightarrow$ 5.  $\_Cl_2 + \_MgF_2 \rightarrow$ 6. Na +  $Ba(NO_3)_2 \rightarrow$ 7.  $K + MgCO_3 \rightarrow$ 8. Pb (II) +  $Al_2(SO_4)_3 \rightarrow$ 

9.  $Zn + HNO_3 \rightarrow$ 

10.  $Cl_2 + CuO \rightarrow$ 

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Double Replacement - Remember that the like ions "switch partners."

- 1. \_\_\_\_BaCl<sub>2</sub> + \_\_\_\_Na<sub>2</sub>CO<sub>3</sub>  $\rightarrow$
- 2.  $Al_2(SO_4)_3 + H_3PO_4 \rightarrow$
- 3.  $\__AgClO_3 + \__Ni(NO_3)_2 \rightarrow$
- 4. \_\_\_PbCl<sub>4</sub> + \_\_\_H<sub>3</sub>PO<sub>4</sub> $\rightarrow$
- 5.  $K_2SO_4 + MgF_2 \rightarrow$
- 6.  $MgCO_3 + CaCl_2 \rightarrow$
- 7. \_\_\_\_AlCl<sub>3</sub> + \_\_\_\_BaSO<sub>4</sub>  $\rightarrow$
- 8.  $Na_2SO_4 + NH_4CIO_3 \rightarrow$
- 9.  $Mg_3(PO_4)_2 + BaCl_2 \rightarrow$

10. \_\_\_\_AlBr<sub>3</sub> + \_\_\_\_H<sub>3</sub>PO<sub>4</sub>  $\rightarrow$