

Student Name: _____ Period: _____ Date: _____

Comprehensive Chemical Product Prediction 1

Predict the products of and write balanced equations for each of the provided sets of reactants. If there is no reaction, indicate the reason. For double replacement reactions, write total and net ionic equations, as well as the molecular equation.

1. $\text{Li}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow$
2. ammonium sulfide reacts with calcium nitrate
3. iodine gas reacts with magnesium bromide
4. lithium metal and aqueous oxygen gas react
5. $\text{Al}_{(s)} + \text{HNO}_{3(aq)} \rightarrow$
6. $\text{AlCl}_{3(s)} + \text{heat} \rightarrow$
7. Calcium combines with aluminum phosphate
8. Nitric acid neutralizes barium hydroxide
9. Water is subjected to electric shock and decomposes
10. $\text{Pb}(\text{NO}_3)_{2(aq)} + \text{H}_2\text{S}_{(aq)} \rightarrow$
11. $\text{H}_{2(g)} + \text{Cl}_{2(g)} \rightarrow$
12. $\text{C}_3\text{H}_7\text{OH}_{(l)} + \text{O}_{2(g)} \rightarrow$
13. potassium metal reacts with hydrofluoric acid
14. $\text{Zn}_{(s)} + \text{H}_3\text{PO}_{4(aq)} \rightarrow$
15. $\text{Na}_{(s)} + \text{Br}_{2(l)} \rightarrow$
16. $\text{NH}_4\text{NO}_{3(aq)} + \text{NaCl}_{(aq)} \rightarrow$
17. $\text{Ca}_{(s)} + \text{O}_{2(g)} \rightarrow$
18. lead(II) nitrate reacts with phosphoric acid
19. lead(II) chloride reacts with ammonium hydroxide
20. $\text{NaF}_{(l)} \rightarrow$