Name: _____ Class: _____ Date: _____

Complete and balance the following reactions. Indicate the state (solid, liquid or gas) of the products when known. If heat is produced as a product include it. If no reaction occurs write NR in the answer blank.

1. ____ $Fe(NO_3)_3$ (aq) + ____ $CaCrO_4$ (aq) $\longrightarrow$ 1. _____

2. ____ $ZnSO_4$ (aq) $\longrightarrow$ 2. _____

3. ____ K_2CO_3 (aq) + ____ HNO_3 (aq) $\longrightarrow$ 3. _____

4. ____ Cl_2 (g) + ____ NaBr (aq) $\longrightarrow$ 4. _____

5. ____ NH_4Br (aq) + ____ Na_2CO_3 (aq) $\longrightarrow$ 5. _____

6. ____ $Al_2(SO_4)_3$ (aq) + ____ $CaCl_2$ (aq) $\longrightarrow$ 6. _____

7. ____ $(NH_4)_2SO_4$ (aq) + ____ $BaCl_2$ (aq) $\longrightarrow$ 7. _____

8. ____ $MgCO_3$ (aq) $\longrightarrow$ 8. _____

9. ____ $FeCl_2$ (aq) + ____ H_2SO_4 (aq) $\longrightarrow$ 9. _____

10. ____ O_2 (g) + ____ C_2H_5OH (aq) $\longrightarrow$ 10. _____

11. ____ $H_2C_2O_4$ (aq) + ____ KOH (aq) $\longrightarrow$ 11. _____

12. ____ Fe (s) + ____ $MgCl_2$ (aq) $\longrightarrow$ 12. _____

13. ____ Zn (s) + ____ HNO_3 (aq) $\longrightarrow$ 13. _____

14. ____ $HCl\ (aq)$ + ____ $Mg(OH)_2\ (aq) \longrightarrow$ 14. _____

15. ____ $C_3H_6O_2\ (aq)$ + ____ $O_2\ (g) \longrightarrow$ 15. _____

16. ____ $Pb(NO_3)_2\ (aq)$ + ____ $KCl\ (aq) \longrightarrow$ 16. _____

17. ____ $NaCl\ (aq)$ + ____ $Ca\ (s) \longrightarrow$ 17. _____

18. ____ $Al_2(CO_3)_3\ (aq)$ + ____ $H_2SO_4\ (aq) \longrightarrow$ 18. _____

19. ____ $H_2SO_4\ (aq)$ + ____ $Ba(OH)_2\ (aq) \longrightarrow$ 19. _____

20. ____ $NH_4Br\ (aq)$ + ____ $Cu_2CO_3\ (aq) \longrightarrow$ 20. _____

21. ____ $Pb(NO_3)_2\ (aq)$ + ____ $Na_2CrO_4\ (aq) \longrightarrow$ 21. _____

22. ____ $Al\ (s)$ + ____ $H_3PO_4\ (aq) \longrightarrow$ 22. _____

23. ____ $Pb\ (s)$ + ____ $ZnCl_2\ (aq) \longrightarrow$ 23. _____

24. ____ $Zn(NO_3)_2\ (aq)$ + ____ $HI\ (aq) \longrightarrow$ 24. _____

25. ____ $Cl_2\ (g)$ + ____ $FeBr_3\ (aq) \longrightarrow$ 25. _____