# Predicting Products

Name: _____

Part 1: Identify each of the following reactions by writing the name of the reaction on the line to the left of the chemical reaction. Complete the reaction on the line to the right. Be sure to balance the equation.

*Reaction Type* *Reaction*

1) _____ _____$CH_3OH$ (l) + _____$O_2$ (g) --> _____

2) _____ _____$Pb(NO_3)_2$(aq) + _____Al(s) --> _____

3) _____ _____$Li_2SO_4$(aq) + _____$BaCl_2$(aq) --> _____

4) _____ _____$CH_4$ (g) + _____$O_2$ (g) --> _____

5) _____ _____$Pb(ClO_3)_2$(aq) + _____KI(aq) --> _____

6) _____ ____ $SbCl_3$ (l) --> _____

7) _____ _____Zn (s) + _____$P_4$ (l) --> _____

8) _____ ____ Li (s) + _____$Al(OH)_3$ (aq) --> _____

Part 2: Write a balanced formula equation for the following word reactions.

9) Write a balanced chemical equation for the reaction of $C_3H_8$ and oxygen gas.

10) Write a balanced chemical equation for the decomposition of water.

11) Write a balanced chemical equation for the reaction of zinc and silver nitrate.

12) Write a balanced chemical equation for the reaction of aluminum and chlorine.

Part 3: For each of the following single replacement reactions, use your activity series to determine whether a reaction will occur in each of the following situations. If a reaction occurs, determine the products and balance. If not, write no reaction.

13) _____Na (s) + _____$CoSO_4$ (aq) --> _____

14) _____Ag (s) + _____$CuC1_2$ (aq) --> _____

15) _____$Ca(NO_3)_2$ (aq) + _____Hg (s) --> _____

16) _____$H_2CO_3$ (aq) + _____ Al (s) --> _____

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Name: _____

Part 1: Identify each of the following reactions by writing the name of the reaction on the line to the left of the chemical reaction. Complete the reaction on the line to the right. Be sure to balance the equation.

*Reaction Type* *Reaction*

1) _____ _____$C_{10}H_{22}$ (s) + _____$O_2$ (g) --> _____

2) _____ _____$AlBr_3$ (aq) + _____$Ca(NO_3)_2$ (aq) --> _____

3) _____ ____ $Sr_3N_2$ (s) --> _____

4) _____ _____Zn (s) + _____$CuCl_2$(aq) --> _____

5) _____ _____$C_7H_6O_2$ (l) + _____$O_2$ (g) --> _____

6) _____ _____$AuCl_3$ (aq) + _____Ca (s) --> _____

7) _____ ____ $MnCl_4$ (s) + _____$K_2Cr_2O_7$ (aq) --> _____

8) _____ _____Ca (s) + _____$As_4$ (s) --> _____

Part 2: Write a balanced formula equation for the following word reactions.

9) Write a balanced chemical equation for the reaction of aluminum and oxygen.

10) Write a balanced chemical equation for the reaction of $C_4H_8$ and oxygen gas.

11) Write a balanced chemical equation for the reaction of calcium chloride and silver nitrate.

12) Write a balanced chemical equation for the reaction of the decomposition of chromium (III) oxide.

Part 3: For each of the following single replacement reactions, use your activity series to determine whether a reaction will occur in each of the following situations. If a reaction occurs, determine the products and balance. If not, write no reaction.

13) _____Cd (s) + _____$Zn(BrO_3)_2$ (aq)--> _____

14) _____Mg (s) + _____$AuI_3$ (aq) --> _____

15) _____$NiSO_3$ (aq) + _____Ba (s) --> _____

16) _____Fe (s) + _____ $Pb(C_2H_3O_2)_2$ (s) --> _____