**Chapter 11 Equation Writing and Balancing Practice #2** Name ­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete and balance the following chemical reactions.

1. NaCl + Pb(NO3)2
2. H2 + Cl2
3. ZnCl2 + AgNO3
4. SO2
5. C2H6 + O2 CO2 + \_\_\_\_\_\_\_\_\_\_\_\_
6. C2H6 + O2 CO + \_\_\_\_\_\_\_\_\_\_\_\_
7. Sodium metal reacts with oxygen.
8. Magnesium metal is put into a solution of copper (II) nitrate.
9. Nitrogen tribromide decomposes.
10. Potassium sulfate reacts with lead (II) sulfate.
11. Diphosphorus pentoxide is produced from its elements.
12. Octane (C8HHHhhhhhH18) is combusted completely.
13. Calcium metal is placed in water.

State whether each of the following equations represents a synthesis(S), decomposition (D), single replacement (SR), or double replacement (DR) reaction.

\_\_\_\_\_ 1. CO2 C + O2 \_\_\_\_\_ 11. 3 CaBr2 + 2 Na3P Ca3P2 + 6 NaBr

\_\_\_\_\_ 2. NaCl + AgNO3 NaNO3 + AgCl \_\_\_\_\_ 12. 2 KI + Br2 2KBr + I2

\_\_\_\_\_ 3. S + Cl2 SCl2 \_\_\_\_\_ 13. C6H12O 6 6 C + 6 H2O

\_\_\_\_\_ 4. BaCl2 + 2 NaOH 2 NaCl + Ba(OH)2 \_\_\_\_\_ 14. 2 NaF 2 Na + F2

\_\_\_\_\_ 5. Zn + CuSO4 ZnSO4 + Cu \_\_\_\_\_ 15. Si + O2 SiO2

\_\_\_\_\_ 6. CH4 C + 2 H2 \_\_\_\_\_ 16. 2 NaI +Pb(NO3)2 2 NaNO3 + PbI2

\_\_\_\_\_ 7. Pb(NO3)2 + Mg Pb + Mg(NO3)2 \_\_\_\_\_ 17. NaI + Cs CsI + Na

\_\_\_\_\_ 8. Mg + 2 HCl MgCl2 + H2 \_\_\_\_\_ 18. H2 + CO + O2 H2CO3

\_\_\_\_\_ 9. H2SO4 H2 + S + 2 O2 \_\_\_\_\_ 19. Li3PO4 3 Li + P + 2 O2

\_\_\_\_\_ 10. 2 O2 + N2 N2O4 \_\_\_\_\_ 20. CS2 + 2 F2 CF4 + 2 S

Choose the words in the list that best complete the paragraphs

Arrow Chemical equation Chemical reaction Coefficient

Combination Decomposition Delta (Δ) Double replacement

Equation Precipitate Product Reactant

Single replacement

Another name for a chemical change is a(n) 1 . Such a change can be represented by means of a written statement called a(n) 2 . The symbol for the word “yields” in such a statement is a(n) 3 . Any substance written to the left of this symbol is called a(n) 4 . Any substance written to the right of this symbol is called a(n) 5 . A number written just to the left of a formula is called a(n) 6 .

A chemical change in which two or more substances combine to form a more complex substance is called a(n) 7 reaction. A change in which a substance is broken down into simpler substances is called a(n) 8 reaction. If the change is caused by heat supplied to the reaction, the Greek symbol 9 is often written above the “yields” symbol in the equation.

A chemical change in which a free element replaces and releases another element in a compound is called a(n) 10 reaction. A chemical change in which there is an exchange of ions between two compounds is called a(n) 11 reaction. A solid substance produced by such a reaction in a liquid medium is called a(n) 12 .

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_