HPS - Balancing Equations Extra 2020 Name:

Balance these reactions and label each reaction type.

**RT: C=Combustion, S=Synthesis, SR = Single Replacement, DR = Double Replacement,**

**D = Decomposition, N/A = Undefined**

\_\_\_1. \_\_\_CaCO3 🡪 \_\_\_CaO + \_\_\_CO2

\_\_\_2. \_\_\_N2 + \_\_\_H2 🡪 \_\_\_NH3

\_\_\_3. \_\_\_NH4NO3 🡪 \_\_\_N2O + \_\_\_H2O

\_\_\_4. \_\_\_Cu(NO3)2 🡪 \_\_\_CuO + \_\_\_NO2 + \_\_\_O2

\_\_\_5. \_\_\_H3PO3 🡪 \_\_\_H3PO4 + \_\_\_PH3

\_\_\_6. \_\_\_KClO3 🡪 \_\_\_KCl + \_\_\_O2

\_\_\_7. \_\_\_TiCl4 + \_\_\_H2O 🡪 \_\_\_TiO2 + \_\_\_HCl

\_\_\_8. \_\_\_H2 + \_\_\_Br2 🡪 \_\_\_HBr

\_\_\_9. \_\_\_C6H12O6 🡪 \_\_\_C2H5OH + \_\_\_CO2

\_\_\_10. \_\_\_C12H22O11 + \_\_\_O2 🡪 \_\_\_CO2 + \_\_\_H2O

\_\_\_11. \_\_\_CuCl2 + \_\_\_K 🡪 \_\_\_KCl + \_\_\_Cu

\_\_\_12. \_\_\_Zn + \_\_\_HCl **→** \_\_\_ZnCl2 + \_\_\_H2

\_\_\_13. \_\_\_As + \_\_\_O2 **→** \_\_\_As4O6

\_\_\_14. \_\_\_C3H8 + \_\_\_O2 **→** \_\_\_CO2 + \_\_\_H2O

\_\_\_15. \_\_\_Ca3(PO4)2 + \_\_\_H2SO4 **→** \_\_\_H3PO4 + \_\_\_CaSO4

\_\_\_16. \_\_\_Na + \_\_\_H2O **→** \_\_\_NaOH + \_\_\_H2

\_\_\_17. \_\_\_C6H6 + \_\_\_Cl2 **→** \_\_\_C6H4Cl2 + \_\_\_HCl

BONUS: Predict the products, balance, and state the reaction type for each example.

1. C4H10 + O2 🡪

2. Cl2  + NaI 🡪

3. Ra + Cl2 🡪