/25

Name:_____ Period:_____ Balancing and Types I

Balance the following chemical equations using only coefficients and indicate the type of chemical reaction at the line on the right. Do not write "1" for any coefficient. Please write large coefficients. Extra parentheses are used on this homework to assist you in identifying polyatomic ions. Use these abbreviations for the types of reaction: S ≡ synthesis, D ≡ decomposition, SR ≡ single replacement, DR ≡ double replacement, C ≡ combustion, ABN ≡ acid base neutralization.

1. $Al + O_2 \rightarrow Al_2O_3$ _____

2. $MgCl_2 + (NH_4)(NO_3) \rightarrow Mg(NO_3)_2 + (NH_4)Cl$ _____

3. $Fe(OH)_3 \rightarrow Fe_2O_3 + H_2O$ _____

4. $Na(OH) + H(NO_3) \rightarrow Na(NO_3) + H_2O$ _____

5. $Fe + H_2O \rightarrow H_2 + Fe_2O_3$ _____

6. $FeCl_3 + K(OH) \rightarrow KCl + Fe(OH)_3$ _____

7. $Al + H_2(SO_4) \rightarrow Al_2(SO_4)_3 + H_2$ _____

8. $Na_2(CO_3) + Ca(OH)_2 \rightarrow Na(OH) + Ca(CO_3)$ _____

9. $C_2H_6 + O_2 \rightarrow CO_2 + H_2O$ _____

10. $P + O_2 \rightarrow P_2O_5$ _____

11. $Na + H_2O \rightarrow Na(OH) + H_2$ _____

12. $Al_2(SO_4)_3 + Ca(OH)_2 \rightarrow Al(OH)_3 + Ca(SO_4)$ _____

13. $Fe + Cu(NO_3) \rightarrow Fe(NO_3)_2 + Cu$ _____

14. $(NH_4)_2S$ + $Pb(NO_3)_2$ → PbS + $(NH_4)(NO_3)$ _____

15. $K(OH)$ + $H_2(SO_4)$ → $K_2(SO_4)$ + H_2O _____

16. $K_3(PO_4)$ + $MgCl_2$ → $Mg_3(PO_4)_2$ + KCl _____

17. NH_3 + O_2 → N_2 + H_2O _____

18. CO_2 + H_2O → $H_2(CO_3)$ _____

19. $Al_2(SO_4)_3$ + $(NH_4)Br$ → $AlBr_3$ + $(NH_4)_2(SO_4)$ _____

20. KF + $BaBr_2$ → BaF_2 + KBr _____

21. H_2S + O_2 → H_2O + S _____

22. $(NH_4)Cl$ + $Na(NO_3)$ → $NaCl$ + $(NH_4)(NO_3)$ _____

23. C_3H_8 + O_2 → H_2O + CO_2 _____

24. $Ca_3(PO_4)_2$ + $H_2(SO_4)$ → $Ca(SO_4)$ + $H_3(PO_4)$ _____

25. $FeCl_3$ + $(NH_4)(OH)$ → $Fe(OH)_3$ + $(NH_4)Cl$ _____