SECOND SEMESTER CHEMISTRY FORMULA AND EQUATION REVIEW

(mandatory remedial *or* optional assignment, depending on last test score)

PART 1 Directions (#1-25)

a) Write the chemical formulas for the following compounds.
b) Classify each formula as BI, BM, TI, or OTHER.

1) aluminum sulfate
2) aluminum sulfide
3) aluminum sulfite
4) diphosphorus pentoxide
5) calcium chromate
6) calcium dichromate
7) boron trifluoride
8) chromium(III) selenide
9) zinc nitrate
10) zinc nitride
11) zinc nitrite
12) carbon tetrabromide
13) copper(I) phosphide
14) sodium phosphate
15) sodium phosphide
16) sodium phosphite
17) phosphorus hexachloride
18) diphosphorus trioxide
19) diphosphorus nonoxide
20) lithium carbonate
21) lithium bicarbonate
22) nitrogen dioxide
23) potassium permanganate
24) ammonium acetate
25) lead (IV) sulfide

PART 2 Directions (#26-40):

a) Balance the following chemical equations.
b) Classify each reaction according to the five major types.

26) $S_8 + O_2 \rightarrow SO_3$

27) $Na + H_2O \rightarrow NaOH + H_2$

28) $C_{10}H_{16} + Cl_2 \rightarrow C + HCl$

29) $C_2H_2 + O_2 \rightarrow CO_2 + H_2O$

30) $C_7H_{16} + O_2 \rightarrow CO_2 + H_2O$

31) $SiO_2 + HF \rightarrow SiF_4 + H_2O$

32) $KClO_3 \rightarrow KCl + O_2$

33) $KClO_3 \rightarrow KClO_4 + KCl$

34) $P_4O_{10} + H_2O \rightarrow H_3PO_4$

35) $Sb + O_2 \rightarrow Sb_4O_6$

36) $Fe_2(SO_4)_3 + KOH \rightarrow K_2SO_4 + Fe(OH)_3$

37) $Na_2CO_3 + HCl \rightarrow NaCl + CO_2 + H_2O$
(TWO CLASSIFICATION TYPES – ORIGINAL AND FINAL)

38) $H_3AsO_4 \rightarrow As_2O_5 + H_2O$

39) $FeCl_3 + NH_4OH \rightarrow Fe(OH)_3 + NH_4Cl$

40) $H_3BO_3 \rightarrow H_4B_6O_{11} + H_2O$

PART 3 Directions (#41-50)

a) Construct and balance the following chemical equations.
b) Classify each reaction according to the five major types.

41) nitrogen + hydrogen → NH_3

42) calcium + phosphoric acid → ???

43) hydrochloric acid →

44) incomplete combustion of C_3H_8

45) cesium nitrite + gallium carbonate → ???

46) copper + oxygen → copper(I) oxide

47) sulfuric acid + iron(III) hydroxide → ???

48) complete combustion of $C_{10}H_{20}$

49) zinc + nitric acid → ???

50) acetic acid + strontium hydroxide → ???