Balancing Equations Practice Name _____

Part A: Identify the following parts of each chemical formula by circling the subscripts and drawing a square around the coefficients.

H_2 2 HCl 4 O_2 CH_4 3 CO_3 2 NaOH

Part B: List the symbols for the atoms in each formula and give the number of each.

C_2H_6 2MgO $4P_4O_{10}$

NH_3 3 $Al(OH)_3$ 2 H_2O_2

Part C: Balance each of the following equations following the procedure described in class. Be sure to show your work.

$P + O_2 \rightarrow P_4O_{10}$

P = P =

O = O =

$Mg + O_2 \rightarrow MgO$

Mg = Mg =

O = O =

$HgO \rightarrow Hg + O_2$

Hg = Hg =

O = O =

$Al_2O_3 \rightarrow Al + O_2$

Al = Al =

O = O =

$BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + HCl$

Ba = Ba =

Cl = Cl =

H = H =

S = S =

O = O =

Part D: Practice Problems – Balance each equation using the process from Part C.

$Cl_2 + NaBr \rightarrow NaCl + Br_2$

$H_2 + N_2 \rightarrow NH_3$

$Na + Br_2 \rightarrow NaBr$

$CuCl_2 + H_2S \rightarrow CuS + HCl$

$HgO + Cl_2 \rightarrow HgCl + O_2$

$C + H_2 \rightarrow CH_4$

Challenge Problem: Give it your best shot!

$C_2H_6 + O_2 \rightarrow CO_2 + H_2O$

Balancing Equations Practice **ANSWER KEY**

Part A: Identify the following parts of each chemical formula by circling the subscripts and drawing a square around the coefficients.

H_2 $2HCl$ $4O_2$ CH_4 $3CO_3$ $2NaOH$

Part B: List the symbols for the atoms in each formula and give the number of each.

C_2H6
C = 2
H = 6

$2MgO$
Mg = 2
O = 2

$4P_4O_{10}$
P = 16
O = 40

NH_3
N = 1
H = 3

$3\ Al(OH)_3$
Al = 3
O = 9
H = 9

$2\ H_2O_2$
H = 4
O = 4

Part C: Balance each of the following equations following the procedure described in class. Be sure to show your work.

$4P + 5O_2 \rightarrow P_4O_{10}$

P = P =
O = O =

$2Mg + O_2 \rightarrow 2MgO$

Mg = Mg =
O = O =

$2HgO \rightarrow 2Hg + O_2$

Hg = Hg =
O = O =

$2Al_2O_3 \rightarrow 4Al + 3O_2$

Al = Al =
O = O =

$BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + 2HCl$

Ba = Ba =
Cl = Cl =
H = H =
S = S =
O = O =

Part D: Practice Problems – Balance each equation using the process from Part C.

$Cl_2 + 2NaBr \rightarrow 2NaCl + Br_2$

$3H_2 + N_2 \rightarrow 2NH_3$

$2Na + Br_2 \rightarrow 2NaBr$

$CuCl_2 + H_2S \rightarrow CuS + 2HCl$

$2HgO + Cl_2 \rightarrow 2HgCl + O_2$

$C + 2H_2 \rightarrow CH_4$

Challenge Problem:

$2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$