**Chemical Equations** Name _____

# Balancing Equations Challenge

**Part A: Parts & Pieces**

(1) Circle each subscript in each chemical formula.
(2) Draw a square around each coefficient.
(3) Answer the questions related to each chemical formula.

$O_2$

What element does the O represent?
_____

$CO_2$

How many atoms of each element are in the formula shown?
C = _____ O = _____

$5H_2$

How many atoms of Hydrogen are in this formula as shown?
_____

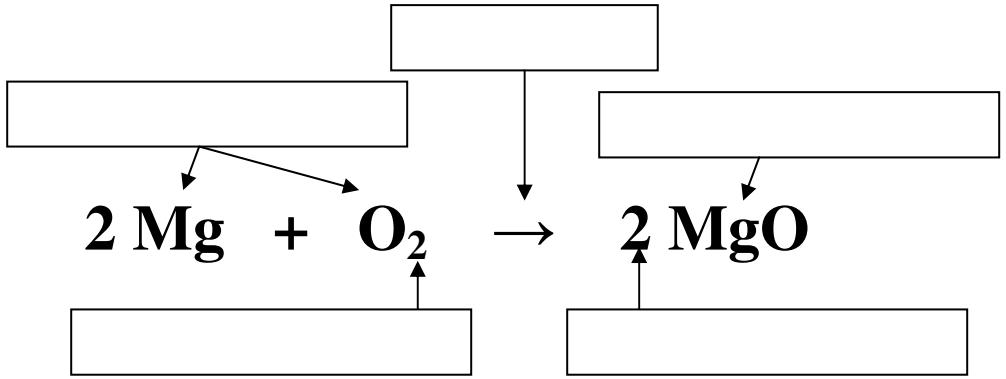
$2C_2H_6$

How many atoms each element are in the formula shown?
C = _____ H = _____

$2Na_2SO_4$

How many atoms each element are in the formula shown?
Na = _____ S = _____ O = _____

**Part B: Label the chemical equation using PRODUCT, REACTANTS, SUBSCRIPT, COEFFICIENT, and YIELDS.**



**Part C: Balance each of the following equations.** **Remember → List the atoms, count, and solve!**

$H_2 + O_2 \rightarrow H_2O$

$H_2O_2 \rightarrow H_2O + O_2$

$Na + O_2 \rightarrow Na_2O$

$N_2 + H_2 \rightarrow NH_3$

$P_4 + O_2 \rightarrow P_4O_6$

$C + H_2 \rightarrow CH_4$

$Al_2O_3 \rightarrow Al + O_2$

$Fe + H_2O \rightarrow Fe_3O_4 + H_2$

$C_2H_6 + O_2 \rightarrow CO_2 + H_2O$

$Na_2SO_4 + CaCl_2 \rightarrow CaSO_4 + NaCl$

## Answer Key

# Balancing Equations Challenge

**Part A: Parts & Pieces**

(1) Circle each subscript in each chemical formula.
(2) Draw a square around each coefficient.
(3) Answer the questions related to each chemical formula.

$O_2$

What element does the O represent?
OXYGEN

$CO_2$

How many atoms of each element are in the formula shown?
C = 1 O = 2

$5H_2$

How many atoms of Hydrogen are in this formula as shown? 10

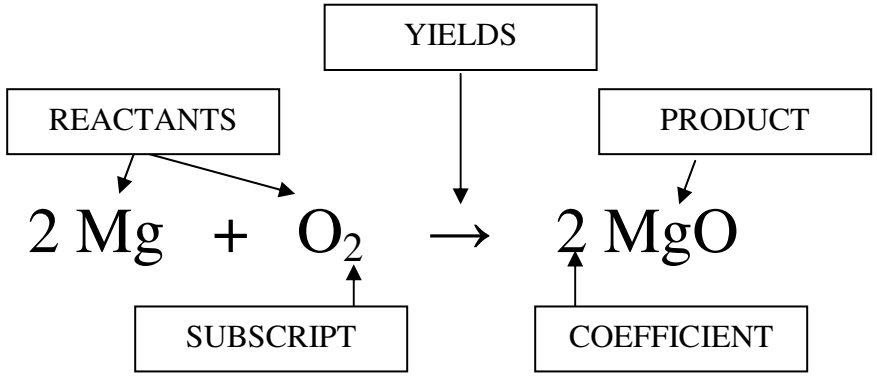
$2C_2H_6$

How many atoms each element are in the formula shown?
C = 4 H = 12

$2Na_2SO_4$

How many atoms each element are in the formula shown?
Na = 4 S = 2 O = _8

**Part B: Label the chemical equation using PRODUCT, REACTANTS, SUBSCRIPT, COEFFICIENT, and YIELDS.**



**Part C: Balance each of the following equations.** **Remember → List the atoms, count, and solve!**

$2H_2 + O_2 \rightarrow 2H_2O$

$2H_2O_2 \rightarrow 2H_2O + O_2$

$4Na + O_2 \rightarrow 2Na_2O$

$N_2 + 3H_2 \rightarrow 2NH_3$

$P_4 + 3O_2 \rightarrow P_4O_6$

$C + 2H_2 \rightarrow CH_4$

$2Al_2O_3 \rightarrow 4Al + 3O_2$

$3Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$

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

$Na_2SO_4 + CaCl_2 \rightarrow CaSO_4 + 2NaCl$