Name _____

Balancing Equations Challenge

Part A: Parts & Pieces
  (1) <u>Circle each subscript</u> in each chemical formula.
  (2) <u>Draw a square</u> around each coefficient.
  (3) <u>Answer the questions</u> 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
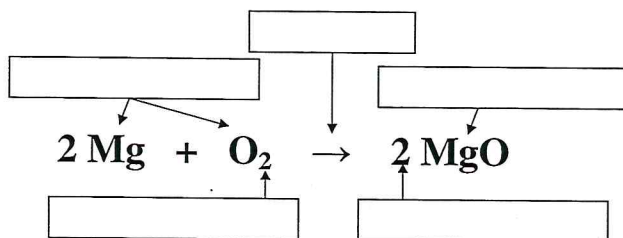are in the formula shown?
C = _____ H = _____

$2Na_2SO_4$

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.

$$2\,Mg \; + \; O_2 \; \rightarrow \; 2\,MgO$$

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

$2\,H_2 + O_2 \rightarrow 2\,H_2O$

$2\,H_2O_2 \rightarrow 2\,H_2O + O_2$

$4\,Na + O_2 \rightarrow 2\,Na_2O$

$N_2 + 3\,H_2 \rightarrow 2\,NH_3$

$P_4 + 3\,O_2 \rightarrow P_4O_6$

$C + 2\,H_2 \rightarrow CH_4$

$2\,Al_2O_3 \rightarrow 4\,Al + 3\,O_2$

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

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

$Na_2SO_4 + CaCl_2 \rightarrow CaSO_4 + 2\,NaCl$