Review Sheet: Chapter 2.A

You should know ***definitions and usage*** of the following words:

Law of Conservation of Matter	**reactants**	**products**
balanced equation	**subscript**	**coefficient**
resources	**renewable resources**	**nonrenewable resources**
waste	**recycling**	**alloy**

1. The total number of atoms of hydrogen in the chemical formula, $Ca(OH)_2$, is 2.
2. In chemical reactions matter is neither created nor destroyed is a statement of Law of Conservation.
3. According to this law, the number of atoms after a reaction takes place is equal to the numbers of atoms present before a reaction takes place.
4. How quickly are nonrenewable resources are produced by the Earth? they are never.
5. The coefficient in the following portion of a chemical equation, 4 $Ni(NO_3)_2$, is 4.
6. In a chemical formula, the coefficient tells you # of molecules of compound.
7. What is conserved in a balanced chemical equation? mass / atoms.
8. How many atoms of iron can be found in Fe_2O_3? 2.
9. In the following portion of a chemical equation, 3 CH_4, the subscript is 4.
10. In a chemical formula the subscript tells you # of atoms.
11. The starting materials in a reaction are called the reactants.
12. In order for a chemical equation to obey the law of conservation of matter it must be balanced.

13. The substances formed in a chemical reaction are called products.

Answer questions #14-16 based on the following equation:

$4\ Cr + 3\ O_2 \rightarrow 2\ Cr_2O_3$

14. What is/are the reactant(s) in this equation?

$Cr + O_2$

15. What is/are the product(s) in this equation?

Cr_2O_3

16. Is the equation balanced? If not, balance the equation.

no . . .

R	P
Cr = 1	Cr = 2
O = 2	O = 3

Balance the following equations:

1. $2\ Al + 3\ H_2SO_4 \rightarrow Al_2(SO_4)_3 + 3\ H_2$

Al = X2	Al = 2
H = X6	S = 3
S = X3	O = 12
O = X12	H = X6

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2. $2\ NaClO_3 \rightarrow 2\ NaCl + 3\ O_2$

Na = X2	Na = X2
Cl = X2	Cl = X2
O = X6	O = X6

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3. $NaOH + HNO_3 \rightarrow NaNO_3 + H_2O$

Na = 1	Na = 1
O = 4	O = 4
N = 1	N = 1
H = 2	H = 2

balanced

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4. $Sb_2S_3 + 3\ Fe \rightarrow 3\ FeS + 2\ Sb$

Sb = 2	Sb = 1
S = 3	S = X3
Fe = X3	Fe = X3

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5. $2H_2 + O_2 \rightarrow 2H_2O$

H = 4 | H = 4
O = 2 | O = 2

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

C = 4 | C = 4
H = 12 | H = 12
O = 14 | O = 14

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7. $Al_2O_3 + 3C + 3Cl_2 \rightarrow 2AlCl_3 + 3CO$

Al = 2 | Al = 2
O = 3 | O = 3
C = 3 | C = 3
Cl = 6 | Cl = 6

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