Nama: _____

Balance the following chemical equations:

1. $C_6H_{12}\,(l) + O_2\,(g) \longrightarrow CO_2\,(g) + 6\,H_2O\,(l)$

2. $Zn\,(s) + AgNO_3\,(aq) \longrightarrow Zn(NO_3)_2\,(aq) + Ag\,(s)$

3. $Al_2(CO_3)_3\,(s) \longrightarrow Al_2O_3\,(s) + CO_2\,(g)$

4. $Mg(OH)_2\,(aq) + H_3PO_4\,(aq) \longrightarrow Mg_3(PO_4)_2\,(aq) + 6H_2O\,(l)$

5. $Fe(OH)_3\,(aq) + H_2SO_4\,(aq) \longrightarrow Fe_2(SO_4)_3\,(aq) + H_2O\,(l)$

Calculate the oxidation number for the underlined atom:

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
1.	$\underline{Cl}$	
2.	$\underline{K}$	
3.	$\underline{F}$	
4.	$\underline{Al}^{3+}$	
5.	$\underline{O_2}$	

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
6.	$\underline{K}^{+}$	
7.	$\underline{NO_3}^{-}$	
8.	$\underline{SO_4}^{2-}$	
9.	$\underline{MnO_2}$	
10.	$\underline{FeO}$	

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
11.	$H_2\underline{S}$	
12.	$\underline{PO_4}^{3-}$	
13.	$\underline{SiO_2}$	
14.	$H_2\underline{O_2}$	
15.	$\underline{NH_4}Cl$	

- In a free element , as an atom or a molecule the oxidation number is zero
- For monoatomic ion, the oxidation number is equal to the charge on the ion
- Fluorine and other halogens have oxidation number of -1 except when combine with oxygen
- Hydrogen is +1 except in metal hydrides (-1)
- Oxygen is -2 except in peroxide (-1) and when combine with fluorine (+2)
- In neutral molecule, the sum of the oxidation number of all atoms that made up the molecule is equal to zero
- For polyatomic ions, the total oxidation number of all atoms that made up the polyatomic ion must be equal to the net charge of the ion

LIVEWORKSHEETS