Nama: \_\_\_\_\_

## Balance the following chemical equations:



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) +  $6H_2O$  (I)

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

## Calculate the oxidation number for the underlined atom:

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
1.	<u>Cl</u>	
2.	<u>K</u>	
3.	<u>F</u>	
4.	<u>Al</u> <sup>3+</sup>	
5.	. <u>O</u> 2	

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
11.	H <sub>2</sub> S	
12.	PO <sub>4</sub> 3-	
13.	<u>Si</u> O <sub>2</sub>	
14.	H <sub>2</sub> O <sub>2</sub>	
15.	<u>N</u> H₄CI	

	FORMULA	OXIDATION NUMBER OF UNDERLINED ATOM
6.	<u>K</u> +	
7.	<u>N</u> O <sub>3</sub> -	
8.	<u>S</u> O <sub>4</sub> <sup>2-</sup>	
9.	MnO <sub>2</sub>	
10.	<u>Fe</u> O	

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 KSHEET