Chemistry

Name _____

Block _____ Date _____

Chemical Reactions

STOICHIOMETRY INTRO WORKSHEET

1. Name the following substances:

	$KClO_3$:	KCl:	O_2:

2. Find the molar mass of each substance:

	$KClO_3$:	KCl:	O_2:

3. Given 0.58 mol sample of O_2 (g) at STP.

(a)	Find the mass of this sample.
(b)	Find the volume of this sample.
(c)	Find the number of molecules in this sample.

4. Identify the type of reaction and balance the equation.

___ $KClO_3$ → ___ KCl + ___O_2

5. Give the following mole ratios for the equation in problem #4

___ $KClO_3$ = ___ KCl ___ KCl = ___O_2 ___ $KClO_3$ = ___O_2

6. Identify the type of reaction and balance the equation.

___ K + ___O_2 → ___ K_2O

7. Give the following mole ratios for the equation in problem #6

___ K = ___O_2 ___ K = ___ K_2O ___O_2 = ___ K_2O

8. Identify the type of reaction and balance the equation.

___CH_4 + ___O_2 → ___CO_2 + ___ H_2O

9. Give the following mole ratios for the equation in problem #8

___CH_4 = ___O_2 ___CH_4 = ___ H_2O ___O_2 = ___CO_2

___CO_2 = ___ H_2O ___CH_4 = ___CO_2 ___O_2 = ___ H_2O

10. Identify the type of reaction and balance the equation.

__ Li + ___ Mg_3N_2 → ___ Li_3N + __ Mg

11. Give the following mole ratios for the equation in problem #10

__ Li = ___ Mg_3N_2 __ Li = ___ Li_3N __ Li = __ Mg

___ Mg_3N_2 = ___ Li_3N ___ Mg_3N_2 = __ Mg ___ Li_3N= __ Mg

12. Identify the type of reaction and balance the equation.

__ Cl_2 + ___ CaI_2 → ___ I_2 + ___ $CaCl_2$

13. Give the following mole ratios for the equation in problem #12

__ Cl_2 = ___ CaI_2 __ Cl_2 = ___ I_2 __ Cl_2=___ $CaCl_2$

___ CaI_2= ___ I_2 ___ CaI_2 =___ $CaCl_2$ ___ I_2=___ $CaCl_2$

14. Identify the type of reaction and balance the equation.

___ NaBr + ___ $Ca_3(PO_4)_2$ → __ Na_3PO_4 + ___ $CaBr_2$

15. Give the following mole ratios for the equation in problem #14

___ NaBr = ___ $Ca_3(PO_4)_2$ ___ NaBr= __ Na_3PO_4 ___ NaBr= ___ $CaBr_2$

___ $Ca_3(PO_4)_2$ = __ Na_3PO_4 ___ $Ca_3(PO_4)_2$= ___ $CaBr_2$ __ Na_3PO_4 =___ $CaBr_2$

16. Identify the type of reaction and balance the equation.

___ $Cu(NO_3)_2$ + ___ Zn_3P_2 → ___ Cu_3P_2 + ___ $Zn(NO_3)_2$

17. Give the following mole ratios for the equation in problem #16

___ $Cu(NO_3)_2$= ___ Zn_3P_2 ___ $Cu(NO_3)_2$ =___ Cu_3P_2 ___ $Cu(NO_3)_2$= ___ $Zn(NO_3)_2$

___ Zn_3P_2=___ Cu_3P_2 ___ Zn_3P_2= ___ $Zn(NO_3)_2$ ___ Cu_3P_2 =___ $Zn(NO_3)_2$

18. Identify the type of reaction and balance the equation.

___ C_4H_{10} + ___ O_2 → ___ CO_2 + ___H_2O

19. Give the following mole ratios for the equation in problem #18

___ C_4H_{10}= ___ O_2 ___ C_4H_{10}= ___ CO_2 ___ C_4H_{10}=___H_2O

___ O_2 = ___ CO_2 ___ O_2= ___H_2O ___ CO_2= ___H_2O

20. Identify the type of reaction and balance the equation.

___ $Al_2(CO_3)_3$ → ___ Al_2O_3 + ___CO_2

21.Give the following mole ratios for the equation in problem #20

___ $Al_2(CO_3)_3$= ___ Al_2O_3 ___ $Al_2(CO_3)_3$=___CO_2 ___ Al_2O_3=___CO_2