Name _____Period_____

More Roadmap Problems

Perform the following conversions. Show all of your work. You must use dimensional analysis. Using units and significant figures count!

1) According to the equation below how many moles of HCl can be formed by 5.00 moles of H_2SO_4?

___ H_2SO_4 + ___ NaCl→ ___ HCl + ___ $NaHSO_4$

2) In the reaction below how many moles of H_2 can be formed by 3.00 moles of Zn?

___ H_2SO_4+ ___ Zn→ ___ $ZnSO_4$ + ___ H_2

3) In the following reaction how many grams of water form from 10.00 g of O_2?

___ C_3H_8 + ___ O_2→ ___ CO_2 + ___ H_2O

4) How many grams of NaCl can form from 75.00 g of $CdCl_2$?

___ $CdCl_2$ + ___ NaOH→ ___ $Cd(OH)_2$ + ___ NaCl

5) How many grams of CCl_2F_2 are needed to form 100.0 g of HF?

___ CCl_4 + ___ HF→ ___ CCl_2F_2 + ___ HCl

6) How many grams of CaF_2 are needed to make 5.00 g of $CaSO_4$?

___ CaF_2 + ___ H_2SO_4 → ___ HF + ___ $CaSO_4$

7) How many grams of $PbCl_2$ form from 500. g of $PbCl_4$?

___ $PbCl_4$ + ___ $SnCl_2$ → ___ $SnCl_4$ + ___ $PbCl_2$

8) How many grams of PH_3 are needed to make 1.00 g of P_4O_{10}?

___ O_2 + ___ PH_3 → ___ P_4O_{10} + ___ H_2O

9) How many grams of CO_2 are formed when 100.0 g of H_2O are formed?

___ $NaHCO_3$ → ___ Na_2CO_3 + ___ CO_2 + ___ H_2O

10) How many grams of NH_3 are needed to completely react with 25.0 g of NO?

___ NH_3 + ___ NO → ___ N_2 + ___ H_2O