Name _____Period_____
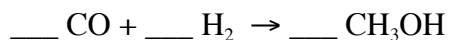
Mole Ratio Problems #2

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

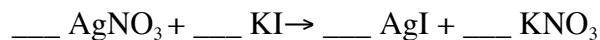1) According to the equation below how many moles of $FeCl_3$ can be formed by 5.00 moles of Cl_2?

$$\_\_\_ Cl_2 + \_\_\_ Fe \rightarrow \_\_\_ FeCl_3$$

2) According to the equation below how many moles of CH_3OH can be formed by 5.00 moles of H_2?

$$\_\_\_ CO + \_\_\_ H_2 \rightarrow \_\_\_ CH_3OH$$

3) According to the equation below how many moles of NH_3 react with 3.0 moles of H_3PO_4?

$$\_\_\_ H_3PO_4 + \_\_\_ NH_3 \rightarrow \_\_\_ NH_4H_2PO_4$$

4) According to the equation below how many moles of AgI can be formed by 10.00 moles of KI?

$$\_\_\_ AgNO_3 + \_\_\_ KI \rightarrow \_\_\_ AgI + \_\_\_ KNO_3$$

5) According to the equation below how many moles of CO_2 can be formed by 7.5 moles of C_6H_6?

$$\_\_\_ C_6H_6 + \_\_\_ O_2 \rightarrow \_\_\_ H_2O + \_\_\_ CO_2$$
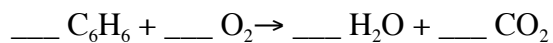
6) According to the equation below how many moles of TiO_2 can be formed by 0.250 moles of H_2O?

$$\underline{\quad} H_2O + \underline{\quad} TiCl_4 \rightarrow \underline{\quad} TiO_2 + \underline{\quad} HCl$$
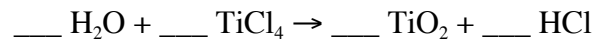
7) According to the equation below how many moles of H_2O can be formed by 25.0 moles of PH_3?

$$\underline{\quad} O_2 + \underline{\quad} PH_3 \rightarrow \underline{\quad} P_4O_{10} + \underline{\quad} H_2O$$
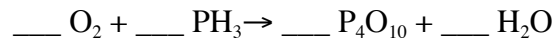
8) According to the equation below how many moles of H_2O can be formed by 0.0050 moles of $BaCO_3$?

$$\underline{\quad} BaCO_3 + \underline{\quad} HCl \rightarrow \underline{\quad} H_2O + \underline{\quad} CO_2 + \underline{\quad} BaCl_2$$

9) According to the equation below how many moles of H_2 can be formed by 15 moles of $NaBH_4$?

$$\underline{\quad} H_2SO_4 + \underline{\quad} NaBH_4 \rightarrow \underline{\quad} H_2 + \underline{\quad} Na_2SO_4 + \underline{\quad} B_2H_6$$

10) According to the equation below how many moles of NaCl can be formed by 0.15 moles of SCl_2?

$$\underline{\quad} NaF + \underline{\quad} SCl_2 \rightarrow \underline{\quad} SF_4 + \underline{\quad} S_2Cl_2 + \underline{\quad} NaCl$$