

Stoichiometry Classwork

1.) Given the equation: $\underline{\quad} \text{H}_3\text{PO}_4 + \underline{\quad} \text{Ca}(\text{OH})_2 \rightarrow \underline{\quad} \text{H}_2\text{O} + \underline{\quad} \text{Ca}_3(\text{PO}_4)_2$

Answer these questions using the equation above (don't forget to balance first!)

(A) What is the mole ratio between $\text{Ca}(\text{OH})_2$ and H_2O ?

(Write answer as $\underline{\quad}$ moles $\text{Ca}(\text{OH})_2$: $\underline{\quad}$ moles H_2O)

(B) If 1.67 moles of $\text{Ca}(\text{OH})_2$ completely react with H_3PO_4 , how many moles of H_2O can be produced? How many moles of $\text{Ca}_3(\text{PO}_4)_2$ can be produced?

2 separate answers-- a # for H_2O & a # for $\text{Ca}_3(\text{PO}_4)_2$

2.) How many moles of chlorine are needed to produce 35.2 grams of FeCl_3 according to this equation? $\underline{\quad} \text{Cl}_2 + \underline{\quad} \text{FeI}_2 \rightarrow \underline{\quad} \text{FeCl}_3 + \underline{\quad} \text{I}_2$

3.) How many grams of calcium carbide are needed to completely react with 2.942 moles of water? $\underline{\quad} \text{CaC}_2 + \underline{\quad} \text{H}_2\text{O} \rightarrow \underline{\quad} \text{Ca}(\text{OH})_2 + \underline{\quad} \text{C}_2\text{H}_2$