**Practice Problems**

Following each equation are two requests for molar ratios from the equation.

1) N2 + 3 H2 ---> 2 NH3

Write the molar ratios for N2 to H2 and NH3 to H2.

2) 2 SO2 + O2 ---> 2 SO3

Write the molar ratios for O2 to SO3 and O2 to SO2.

3) PCl3 + Cl2 ---> PCl5

Write the molar ratios for PCl3 to Cl2 and PCl3 to PCl5.

4) 4 NH3 + 3 O2 ---> 2 N2 + 6 H2O

Write the molar ratios for NH3 to N2 and H2O to O2.

5) Fe2O3 + 3 CO ---> 2 Fe + 3 CO2

Write the molar ratios for CO to CO2 and Fe to CO.

**Answers**

1) N2 + 3 H2 ---> 2 NH3

N2 to H2 http://chemteam.info/Stoichiometry/Molar-Ratio-1-3.GIF

NH3 to H2 http://chemteam.info/Stoichiometry/Molar-Ratio-2-3.GIF

2) 2 SO2 + O2 ---> 2 SO3

O2 to SO3 http://chemteam.info/Stoichiometry/Molar-Ratio-1-2.GIF

O2 to SO2 http://chemteam.info/Stoichiometry/Molar-Ratio-1-2.GIF

3) PCl3 + Cl2 ---> PCl5

PCl3 to Cl2 http://chemteam.info/Stoichiometry/Molar-Ratio-1-1.GIF

PCl3 to PCl5 http://chemteam.info/Stoichiometry/Molar-Ratio-1-1.GIF

4) 4 NH3 + 3 O2 ---> 2 N2 + 6 H2O

NH3 to N2 http://chemteam.info/Stoichiometry/Molar-Ratio-4-2.GIF

H2O to O2 http://chemteam.info/Stoichiometry/Molar-Ratio-6-3.GIF

5) Fe2O3 + 3 CO ---> 2 Fe + 3 CO2

CO to CO2 http://chemteam.info/Stoichiometry/Molar-Ratio-3-3.GIF

Fe to CO http://chemteam.info/Stoichiometry/Molar-Ratio-2-3.GIF