Mole Ratio Worksheet

1) Given this equation: $N_2 + 3 H_2 \longrightarrow 2 NH_3$, write the following molar ratios: a) N_2/H_2 b) N₂ / NH₃ c) H₂ / NH₃ 2) Given the following equation: 8 H₂ + S₈ ---> 8 H₂S, write the following molar ratios: a) H₂ / H₂S b) H₂ / S₈ c) H₂S / S₈ 3) Answer the following questions for this equation: 2 H₂ + O₂ ---> 2 H₂O a) What is the H₂ / H₂O molar ratio? b) Suppose you had 20 moles of H₂ on hand and plenty of O₂, how many moles of H₂O could you make? c) What is the O₂ / H₂O molar ratio? d) Suppose you had 20 moles of O₂ and enough H₂, how many moles of H₂O could you make? 4) Use this equation: $N_2 + 3 H_2 \longrightarrow 2 NH_3$, for the following problems a) If you used 1 mole of N₂, how many moles of NH₃ could be produced? b) If 10 moles of NH₃ were produced, how many moles of N₂ would be required? c) If 3.00 moles of H₂ were used, how many moles of NH₃ would be made?

d) If 0.600 moles of NH₃ were produced, how many moles of H₂ are required?