

Use the balanced reaction below and the relationship that "1 mole of a compound = the gram formula mass of that compound" to answer the questions below.



The gram formula masses for the three species seen in the reaction above are as follows: $\text{NH}_3 = 17 \text{ g}$ $\text{N}_2 = 28 \text{ g}$ $\text{H}_2 = 2 \text{ g}$

- 1) How many moles are present in 34 grams of NH_3 ? (Remember: one mole of NH_3 is ALWAYS equal to 17 grams)
- 2) What is the ratio of NH_3 to H_2 moles according to the balanced reaction above?
- 3) Using the reaction above (remember, it is just like a recipe!), how many moles of H_2 would be produced if 2 moles of NH_3 are used?
- 4) How many grams of H_2 are present in 6 moles of H_2 ?
- 5) What is the ratio of NH_3 to N_2 in the reaction above?
- 6) If you have 1.2 moles of NH_3 , how many moles of N_2 are present?
- 7) What is the ratio of N_2 to H_2 in the reaction above?
- 8) If you have 0.05 moles of N_2 , how many moles of H_2 are present?
- 9) Convert 0.15 moles of H_2 to grams.
- 10) Convert 0.6 moles of N_2 to grams.
- 11) What type of reaction (of the four you have learned) is the reaction above?