

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: $\text{H}_2\text{O} = 18 \text{ g}$ $\text{H}_2 = 2 \text{ g}$ $\text{O}_2 = 32 \text{ g}$

- 1) How many moles are present in 54 grams of H_2O ? (Remember: one mole of H_2O is ALWAYS equal to 18 grams)
- 2) What is the ratio of H_2O 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 4 moles of H_2O are used?
- 4) How many grams of H_2 are present in 4 moles of H_2 ?
- 5) What is the ratio of H_2 to O_2 in the reaction above?
- 6) If you have 2.5 moles of H_2O , how many moles of O_2 will be produced?
- 7) What is the ratio of H_2O to O_2 in the reaction above?
- 8) If you produce 0.25 moles of O_2 , how many moles of H_2O did you react?
- 9) Convert 0.35 moles of H_2O to grams.
- 10) Convert 0.6 grams of H_2 to moles.
- 11) What type of reaction (of the four you have learned) is the reaction above?