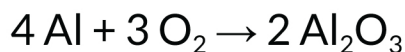
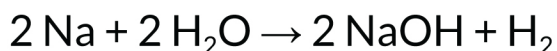


MOLE TO MOLE STOICHIOMETRY WORKSHEET

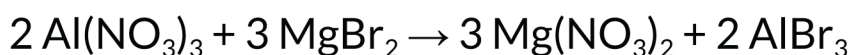
1. In the reaction below, how many moles of aluminum will be used with 1.33 moles of oxygen?



2. How many moles of hydrogen will be produced when reacted with 0.0204 moles of sodium in the following reaction?



3. Using the equation:

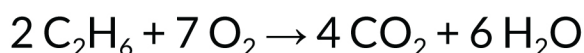


a. Find the number of moles of $\text{Al}(\text{NO}_3)_3$ used to produce 2.3 moles of $\text{Mg}(\text{NO}_3)_2$

b. Find the number of moles of $\text{Al}(\text{NO}_3)_3$ used to produce 0.78 moles of AlBr_3 .

c. Find the number of moles of MgBr_2 that reacts with 1.05 moles of $\text{Al}(\text{NO}_3)_3$

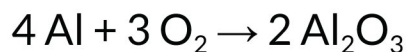
4. In the reaction below, how many moles of carbon dioxide are produced if 19.65 moles of water are produced?



MOLE TO MOLE STOICHIOMETRY WORKSHEET

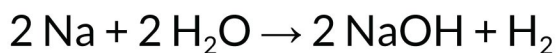
Answers

1. In the reaction below, how many moles of aluminum will be used with 1.33 moles of oxygen?



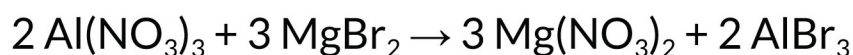
$$1.33 \text{ mol O}_2 \times (4 \text{ mol Al} / 3 \text{ mol O}_2) = 1.77 \text{ mol Al}$$

2. How many moles of hydrogen will be produced when reacted with 0.0204 moles of sodium in the following reaction?



$$0.0204 \text{ mol Na} \times (1 \text{ mol H}_2 / 2 \text{ mol Na}) = 0.0102 \text{ mol H}_2$$

3. Using the equation:



a. Find the number of moles of $\text{Al}(\text{NO}_3)_3$ used to produce 2.3 moles of $\text{Mg}(\text{NO}_3)_2$

$$2.3 \text{ mol Mg}(\text{NO}_3)_2 \times (2 \text{ mol Al}(\text{NO}_3)_3 / 3 \text{ mol Mg}(\text{NO}_3)_2) = 1.53 \text{ mol Al}(\text{NO}_3)_3$$

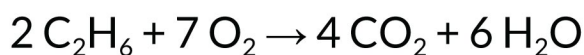
b. Find the number of moles of $\text{Al}(\text{NO}_3)_3$ used to produce 0.78 moles of AlBr_3 .

$$0.78 \text{ mol AlBr}_3 \times (2 \text{ mol Al}(\text{NO}_3)_3 / 2 \text{ mol AlBr}_3) = 0.78 \text{ mol Al}(\text{NO}_3)_3$$

c. Find the number of moles of MgBr_2 that reacts with 1.05 moles of $\text{Al}(\text{NO}_3)_3$

$$1.05 \text{ mol Al}(\text{NO}_3)_3 \times (3 \text{ mol MgBr}_2 / 2 \text{ mol Al}(\text{NO}_3)_3) = 1.58 \text{ mol MgBr}_2$$

4. In the reaction below, how many moles of carbon dioxide are produced if 19.65 moles of water are produced?



$$19.65 \text{ mol H}_2\text{O} \times (4 \text{ mol CO}_2 / 6 \text{ mol H}_2\text{O}) = 13.1 \text{ mol CO}_2$$