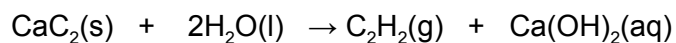


## Moles to Grams Stoichiometry Practice

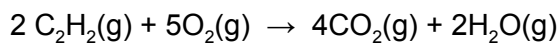
1. Acetylene gas ( $C_2H_2$ ) is produced as a result of the following reaction.



a. If 15.2 moles of  $CaC_2$  are consumed in this reaction, how many grams of  $H_2O$  are needed?

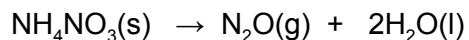
b. How many grams of  $Ca(OH)_2$  would be formed with 8.3 moles of  $CaC_2$ ?

2. Acetylene gas,  $C_2H_2$ , is used in welding, produces an extremely hot flame when it burns in pure oxygen according to the following reaction.



a. How many moles of water ( $H_2O$ ) are produced when 50.0 grams of  $C_2H_2$  burns completely?

3. Laughing gas (nitrous oxide,  $N_2O$ ) is sometimes used as an anesthetic in dentistry. It is produced when ammonium nitrate is decomposed according to the following reaction.



a. How many moles of  $NH_4NO_3$  are required to produce 37.4g of  $N_2O$ ?

b. How many moles of water are produced with 18.2 g of  $N_2O$ ?

## Grams to Grams Stoichiometry

4. For this reaction:  $6\text{PbO} + \text{O}_2 \rightarrow 2\text{Pb}_3\text{O}_4$
- How many grams of  $\text{Pb}_3\text{O}_4$  are produced from 7.85 grams of lead(II) oxide?
  
  
  
  
  
  
  
  
  
  
  - How many grams of lead(II) oxide must react with 1.75 grams of oxygen?
5. For this reaction:  $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$
- How many grams of aluminum oxide will be formed from 17 grams of aluminum reacting?
  
  
  
  
  
  
  
  
  
  
  - How many grams of oxygen are needed to react with 12.8 grams of aluminum?
6. For this reaction:  $4\text{NH}_3 + 5\text{O}_2 \rightarrow 4\text{NO} + 6\text{H}_2\text{O}$
- How many grams of oxygen are needed to react with 1.24 grams of  $\text{NH}_3$ ?
  
  
  
  
  
  
  
  
  
  
  - How many grams of water are produced from 7.65 grams of oxygen?