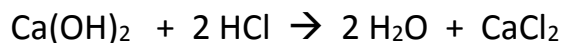


## Stoichiometry Practice Problems

### Practice Problem 1:



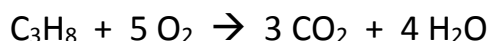
- How many moles of  $\text{Ca(OH)}_2$  are required to react with 6.4 moles of  $\text{HCl}$ ?
- How many moles of  $\text{HCl}$  are required to produce 3.5 moles of  $\text{H}_2\text{O}$ ?
- How many moles of  $\text{Ca(OH)}_2$  are required to produce 12 moles of  $\text{H}_2\text{O}$ ?

### Practice Problem 2:



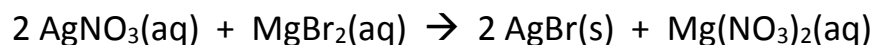
- How many moles of  $\text{O}_2$  are required to produce 8.2 moles of  $\text{H}_2\text{O}$ ?
- How many moles of  $\text{H}_2\text{O}$  are produced when 10.5 moles of  $\text{O}_2$  react?
- How many moles of  $\text{C}_2\text{H}_2$  are required to produce 3.6 moles of  $\text{H}_2\text{O}$ ?
- How many molecules of  $\text{CO}_2$  are produced when 7.4 moles of  $\text{C}_2\text{H}_2$  burn completely in oxygen?

### Practice Problem 3:



- If 12 moles of carbon dioxide are formed, how many moles of  $\text{C}_3\text{H}_8$  (propane) were burned?
- If 2.33 moles of  $\text{C}_3\text{H}_8$  are burned, how many grams of  $\text{CO}_2$  are made?
- How many moles of oxygen are required to react with 3.01 moles of  $\text{C}_3\text{H}_8$ ?
- How many liters of  $\text{CO}_2$  are produced when 4.2 moles of  $\text{C}_3\text{H}_8$  burn in excess  $\text{O}_2$  at STP?

### Practice Problem 4:



- How many moles of  $\text{MgBr}_2$  are required to react completely with 3.55 moles of  $\text{AgNO}_3$ ?
- If 3.13 moles of  $\text{MgBr}_2$  react completely with excess  $\text{AgNO}_3$ , how many grams of  $\text{AgBr}$  are formed?
- To produce 1.98 moles of  $\text{AgBr}$ , how many grams of  $\text{MgBr}_2$  are needed?

# Stoichiometry Practice Problems Answer Key

## Practice Problem 1:

- a) 3.2 mol  $\text{Ca(OH)}_2$
- b) 3.5 mol  $\text{HCl}$
- c) 6.0 mol  $\text{Ca(OH)}_2$

## Practice Problem 2:

- a) 21 mol  $\text{O}_2$
- b) 4.20 mol  $\text{H}_2\text{O}$
- c) 3.6 mol  $\text{C}_2\text{H}_2$
- d)  $8.9 \times 10^{24}$  molecules  $\text{CO}_2$

## Practice Problem 3:

- a) 4 mol  $\text{C}_3\text{H}_8$
- b) 308 g  $\text{CO}_2$
- c) 15.1 mol  $\text{O}_2$
- d) 280 L  $\text{CO}_2$

## Practice Problem 4:

- a) 1.78 mol  $\text{MgBr}_2$
- b) 1180 g  $\text{AgBr}$
- c) 182 g  $\text{MgBr}_2$