

## REACTION AND MOLE PRACTICE (#1)

Mole ratios or mole fractions are written converting the given or “old” substance (A) into the “new” substance (B).

Write all mole ratios as fractions:  $\frac{\text{mol B (new)}}{\text{mol A (old)}}$

- 1) sulfuric acid + barium hydroxide  $\rightarrow$  \_\_\_\_\_ + \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of sulfuric acid (A) to barium hydroxide (B)?
- 2) hydrogen + chlorine  $\rightarrow$  \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of hydrogen (A) to the product (B)?
- 3) copper + oxygen  $\rightarrow$  copper(II) oxide
  - a. Balance the equation.
  - b. What is the mole ratio of copper(II) oxide (A) to copper (B)?
- 4) aluminum + sulfuric acid  $\rightarrow$  \_\_\_\_\_ + \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of aluminum (A) to sulfuric acid (B)?
- 5) zinc + hydrochloric acid  $\rightarrow$  \_\_\_\_\_ + \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of zinc (A) to hydrogen gas (B)?
- 6) phosphoric acid + sodium hydroxide  $\rightarrow$  \_\_\_\_\_ + \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of sodium hydroxide (A) to water (B)?
- 7) carbonic acid  $\rightarrow$  carbon dioxide + water
  - a. Balance the equation.
  - b. What is the mole ratio of water (A) to carbonic acid (B)?
- 8) sodium + bromine  $\rightarrow$  sodium bromide
  - a. Balance the equation.
  - b. What is the mole ratio of sodium bromide (A) to bromine (B)?
- 9) sodium hydrogen carbonate  $\rightarrow$  sodium carbonate + carbon dioxide + water
  - a. Balance the equation.
  - b. What is the mole ratio of sodium hydrogen carbonate (A) to sodium carbonate (B)?
- 10) calcium acetate + lithium sulfide  $\rightarrow$  \_\_\_\_\_ + \_\_\_\_\_
  - a. Balance the equation.
  - b. What is the mole ratio of calcium acetate (A) to *each* of the products (B1, B2)? (set up two mole fractions)