"TRY YOURSELF" PROBLEMS FROM STUDY SECTION 3.1

Try Yourself 3.1

$$2Al(s) + 3Br_2(\ell) \rightarrow Al_2Br_6(s)$$

- a. Name the reactants and products and give their physical states.
- b. What are the stoichiometric coefficients in this equation?
- c. If you were to use 8000 atoms of Al, how many molecules of Br₂ are required to consume the Al completely?

Try Yourself 3.2

Balance the following reaction equations.

$$Cr(s) + O_2(g) \rightarrow Cr_2O_3(s)$$

$$AlCl_3(s) + NaOH(aq) \rightarrow Al(OH)_3(s) + NaCl(aq)$$

Try Yourself 3.3

Write a balanced chemical equation for the combustion of butane, C₄H₁₀.