Chemistry—Ch. 12 Guided Notes and worksheet

1. Write the key concept on p. 354.

2. Define stoichiometry.

3. Write the key concept on p. 356.

4. What does a chemical equation tell you about the following quantities (p. 356-357)?
   a)   number of atoms:
   b)   number of molecules:
   c)   moles:
   d)   mass:
   e)   volume:

5. Write the key concept AND the sentence following the key concept on p. 357.

6. Define mole ratio.

7. Write the equation on p. 359 and the mole ratios shown.

8. Write the key concept on p. 359.

9. Read and write sample problem 12.2 on p. 360.

10. (p. 360) Given $4Al(s) + 3O_2(g) \rightarrow 2Al_2O_3(s)$,
    a) write 6 mole ratios that can be derived from this equation:

    b) how many moles of aluminum are needed to form 3.7 mole Al_2O_3?

11. Read and write sample problem 12.3 on p. 361.

12. (p. 361) Given $CaC_2(s) + 2H_2O(l) \rightarrow C_2H_2(g) + Ca(OH)_2(aq)$ (acetylene gas and calcium carbide), how many grams of acetylene are produced by adding water to 5.00 g CaC_2?

13. Read and write sample problem 12.4 on p. 364.