Answers to Practice Problems A, B, C, D, and Section Review (page 228-233)

The Mole and Chemical Composition

Practice Problems A

1. 1.13×10^{23} ions Na^+

3. 2.544×10^{24} molecules $C_2H_4O_2$

Practice Problems B

1. 0.940 mol Xe

3. 4.5×10^{-7} mol termites

5. a. 1.050×10^{-2} mol O

b. 5.249×10^{-3} mol C

c. 3.690 mol O

d. 8.841×10^{-8} mol K^+

e. 3.321×10^{-10} mol Cl^-

f. 6.64×10^{-10} mol N

g. 6.63×10^{2} mol Cl^-

Practice Problems C

1. 223 g Cu

3. 1063 g CH_4

Practice Problems D

1. 2.25×10^{24} atoms Cu

3. 9.33×10^{25} atoms As

Section 1 Review

7. a. 3.61×10^{24} Na^+ ions

b. 7.23×10^{24} Na^+ ions

c. 3.08×10^{24} Na^+ ions

9. a. 2.86×10^{-7} g He

b. 15.22 g CH_4

c. 200.5 g Ca^{2+}

11. 206.3 g ibuprofen

13. a. 26.7 g Ca

b. 50. g boron-11

c. 7.032×10^{-4} g Na^+