



CHEMICAL QUANTITIES

Chapter Test B

A. Matching

Match each term in Column B with the correct description in Column A. Write the letter of the correct term on the line.

Column A	Column B
<u>F</u> 1. the percent by mass of each element in a compound	a. molar mass
<u>H</u> 2. 0°C and 101.3 kPa or 1 atmosphere	b. empirical formula
<u>B</u> 3. the lowest whole-number ratio of the atoms of elements in a compound	c. atomic mass
<u>E</u> 4. the species present in a substance—usually atoms, molecules, or formula units	d. molar volume
<u>G</u> 5. 6.02×10^{23} representative particles of a substance	e. representative particle
<u>C</u> 6. the mass of an atom of an element	f. percent composition
<u>A</u> 7. the mass of one mole of any element or compound	g. one mole
<u>D</u> 8. 22.4 L of any gas measured at STP	h. standard temperature and pressure
<u>C</u> 12. What is the molar mass of C_3H_8 ?	a. 36.0 g b. 11.0 g c. 44.0 g d. 6.02×10^{23} g
<u>A</u> 13. How many atoms are contained in 12.5 grams of silver?	a. 6.97×10^{22} atoms b. 7.52×10^{24} atoms c. 0.116 atoms d. 1.92×10^{-25} atoms
<u>C</u> 14. What is the percent of aluminum in $Al_2(SO_4)_3$?	a. 28.1% b. 54.0% c. 15.8% d. 56.7%
<u>B</u> 15. What is the mass of hydrogen in 50.0 g of propane, C_3H_8 ?	a. 18.2 g b. 9.1 g c. 44.0 g d. 81.8 g
<u>D</u> 16. Find the number of moles in 3.30 g of $(NH_4)_2SO_4$?	a. 132.1 mol b. 40.0 mol c. 0.0279 mol d. 0.0250 mol

$$Al_2(SO_4)_3 = 27(2) = \frac{54}{342}$$

$$\frac{8}{44}$$

$$28 + 8 + 32 + 64 = 132$$

$$\frac{3.30 \text{ g}}{132} =$$