

1 • Matter and Measurement

REVIEW QUESTIONS

1. Note the boldface words or phrases in each section. Define each of them.

Section 1.1 matter solid liquid gas kinetic molecular theory microscopic particulate heterogeneous mixture homogeneous mixture solution purification	Section 1.3 compound formulas molecules ionic compound ions Section 1.4 density temperature Celsius Fahrenheit Kelvin extensive properties intensive properties	Section 1.5 physical change chemical change chemical equation Section 1.6 International System of Units (SI) scientific notation exponential notation Section 1.7 dimensional analysis precision accuracy significant figures Section 1.8
Section 1.2 substance element symbol Periodic Table of Elements atom		

- How do atoms or molecules behave differently in the three states of matter?
- What is the relationship between density, volume, and mass?
- What is the difference between the Fahrenheit and Celsius temperature scales?
- What is the significance of zero degrees Kelvin (0 K)?
- What is an element?
- Is a compound always a molecule?
- Is a molecule always a compound?
- What are the two different kinds of mixtures and what is the difference between them?
- What is the difference between a chemical change and a physical change?
- What is the difference between an extensive property and an intensive property?
- What is the base SI unit for mass?
- List the six base SI units of interest to chemists.
- Are the values of the exponents in scientific notation always positive?
Can the value of the exponent be zero?
- Is it possible for a series of measurements to be accurate but not very precise?