

3.3

INTERNATIONAL SYSTEM OF UNITS

SECTION REVIEW

Objectives

- List SI units of measurement and common SI prefixes
- Distinguish between the mass and weight of an object

Key Terms

- International System of Units (SI)
- meter (m)
- volume
- liter (L)
- weight
- kilogram (kg)
- gram (g)

Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

- The international System of Units (SI) is a revision of the _____ **1.** _____
- _____ **1** system. There are _____ **2** base SI units. In SI, the base _____ **2.** _____
- unit of length is the _____ **3.** _____
- The space occupied by matter is known as _____ **4.** _____
- taken up by a cube that is 10 cm on each edge is one _____ **5.** _____
- The quantity of _____ **6** an object contains is its mass. A _____ **6.** _____
- measure of the pull of gravity on an object of given mass is its _____ **7.** _____
- _____ **7** . The mass of one cubic centimeter of water at 4 °C is one _____ **8.** _____
- _____ **8** .

Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

- _____ **9.** The SI base unit of mass is the milliliter.
- _____ **10.** A decigram is 100 times smaller than a gram.
- _____ **11.** The SI unit of volume is derived from the unit of length.
- _____ **12.** There are six basic SI units of measurement.

Part C Matching

Match each description in Column B to the correct term in Column A.

Column A	Column B
_____ 13. International System of Units	a. non-SI unit of volume
_____ 14. meter	b. standardized system of measurement
_____ 15. volume	c. mass unit commonly used in chemistry
_____ 16. liter	d. the SI unit of length
_____ 17. weight	e. force that measures the pull of gravity on a given mass
_____ 18. kilogram	f. the space occupied by a sample of matter
_____ 19. gram	g. basic SI unit of mass

Part D Questions and Problems

Answer the following in the space provided.

20. What is the volume of a board that measures 1.8 cm by 8.8 cm by 30.5 cm?

21. Which one of the following is not a base SI unit?

- a. kilogram b. liter c. kelvin d. meter

22. What is the symbol and meaning of each prefix?

- | | |
|-----------|----------|
| a. pico- | a. _____ |
| b. kilo- | b. _____ |
| c. micro- | c. _____ |
| d. centi- | d. _____ |