

In addition to a patient's weight and dose of medication, a pharmacy technician must have an understanding of the different systems of measurement to prevent medication errors while interpreting prescriptions. The following exercises provide opportunities for you to practice calculating equivalent measurements. Refer to Table 4-5 and Table 4-6 on p. 30 for abbreviations and symbols for ounce in both the apothecary and household systems.

Although it is not noted in the text, one cubic centimeter (cc) is equivalent to one mL. For example, 5 cc = 5 mL, 3.1 mL = 3.1 cc, and so forth.

Apothecary measures are approximate, not exact.

- The basic unit of apothecary weight is the grain (gr).

Answer: A basic unit of apothecary weight equal to 20 grains

- The apothecary system uses Roman numerals and fractions.

Answer: Answers in the apothecary system are expressed in lower case Roman numerals for quantities of twenty (20) or less. For quantities greater than twenty, answers are expressed in Arabic numbers and fractions.

• **The symbol or abbreviation comes first, followed by the quantity expressed in Roman numerals.**

Answer: The symbol or abbreviation comes first, followed by the quantity expressed in Roman numerals as because for parts of publications mentioned in parentheses, brackets, footnotes, side notes, list of references, synonymies, tables, and leader work, are followed by figures, letters, or Roman numerals they are following abbreviations which are used such as no., nos. (number, numbers). Lowercase "n" is used in Survey reports except in column heads.

Calculate equivalent measurements within the metric system for the following exercises:

1. $2 \text{ mcg} = \underline{\hspace{1cm}} \text{ mg}$

SOL:

$$1 \text{ milligram (mg)} = 1000 \text{ mcg}$$

$$= \text{So, } 2 \text{ microgram} = 2/1000$$

$$= 0.002 \text{mg}$$

2. 0.4 L = ____ mL

SOL:

$$= 1 \text{ Litre} = 1000 \text{ ml}$$

$$= \text{so } 0.4 \text{ Lire} = 0.4 * 1000$$

$$= 400 \text{ ml}$$

3. 100 mg = ____ mcg

SOL:

$$= 1 \text{ milligram (mg)} = 1000 \text{ mcg}$$

$$= 100 \text{ miligram} = \{100 * 1000\} \text{mcg}$$

$$= 100000 \text{ mcg}$$

4. 600 mg = ____ g