

# Index

Page numbers followed by *t* indicate tables.

## A

---

Abbreviation tables, 43–45  
Accumulation, drug, 113  
Accuracy, 25  
Active ingredient in a stock solution when strength of diluted portion is known, 80–81  
Actual body weight, 113  
Addition of fractions, 6–7  
Admixtures, 75–76, 83–86  
    reconstitution of intravenous, 123–124  
Aliquot method, 27, 28–30, 76  
Alligation alternate, 84–86  
Alligation medial, 83–84  
Amount of solution of a desired strength, 78–79  
Apothecaries' system, 17, 22*t*  
Arabic numerals, 3, 5  
Avoirdupois system, 17

## B

---

Body surface area (BSA), 112–113, 114  
    reconstitution and, 122

## C

---

Class A torsion balance, 26, 32  
Clinical laboratory test values, 70  
Cockcroft-Gault equation, 115  
Colloidal solutions, 75  
Common fractions, 6–10  
Components of a prescription label, 38  
Compounding, 37  
    abbreviations, 45*t*

    of a commercial product into doses for a patient, 50  
Concentration, 14, 15*t*  
    admixtures, 75–76, 83–86  
    clinical laboratory test values, 70  
    converted to mg/mL or mcg/mL, 70–71  
    examples of, 91*t*  
    importance for medical math and clinical practice, 61–62, 75–76  
    liquids, 77–79  
    parts per million (PPM) and parts per billion (PPB), 69–70  
    percent volume in volume, 64–65  
    percent weight in volume, 62–64  
    problem solutions, 143  
    quantity and strength, 76–77  
    ratio strength, 67–69  
    solids, 82–83  
    of solutes, 99–109  
    stock solutions or mixtures, 79–82  
    summary and practice problems, 71–73, 86–88  
Conversions  
    of concentrations to mg/mL or mcg/mL, 70–71  
    problem solutions, 129–130  
    setting up calculations for, 17–20  
cytochrome P450 microsomal (CYP) enzymes, 116

## D

---

Daily dose, 112  
DEA number, 37

Decimals, 9–10  
Denominate numbers, 4–5  
Density  
  defined, 54  
  importance for medical math and clinical practice, 53–54  
  problem solutions, 141  
  summary and practice problems, 57–59  
Dilution and concentration of mixtures  
  admixtures, 75–76, 83–86  
  importance for medical math and clinical practice, 75–76  
  liquids, 77–79  
  problem solutions, 145  
  quantity and strength, 76–77  
  stock solutions or mixtures, 79–82  
  summary and practice problems, 86–88  
Dimensional analysis, 19  
Directions for patients, 38  
Division of fractions, 8–9  
Dosage regimen, 112  
Dose, 112  
Dosing  
  based on body surface area, 114  
  based on kidney function, 114–115  
  based on themometry, 115–116  
  based on weight, 113–114  
  definitions, 112–113  
  frequency abbreviations in, 44*t*  
  importance for medical math and clinical practice, 111  
  problem solutions, 151  
  of warfarin based on genetic testing, 116–117  
Drug form and routes of administration  
  abbreviations, 43*t*

---

**E**

Ease-of-use, patient, 48  
Electrolyte solutions, 89–90, 92  
Electronic balance, 26  
Emulsions, 75  
Error, percentage of, 27–28  
Exponential notation, 11

---

**F**

Flow rate  
  of intravenous fluids, 124  
  of parenteral solutions, 122–123  
  problem solutions, 153–155  
Formulas  
  importance for medical math and clinical practice, 47–48  
  maintaining the proportion of ingredients in, 48–49  
  problem solutions, 139  
  summary and practice problems, 51–52  
  using a commercial product to compound doses for a patient, 50  
Formulas method of conversions, 20  
Fractions, 4  
  common and decimal, 6–10  
  expressed as percentages, 10–11  
Freeze-drying (lyophilization), 120

---

**G**

Genetic testing, dosing of warfarin based on, 116–117  
Gravity, specific. *See* specific gravity

---

**H**

*Handbook on Injectable Drugs*, 119–120  
Household system of measurement, 17, 22*t*  
Hypertonic solutions, 90  
Hypotonic solutions, 90

---

**I**

Ideal body weight (IBW), 113–114  
Improper fractions, 6  
Indication for use of drug therapy  
  abbreviations, 45*t*  
International Normalized Ratio (INR), 116–117  
Intravenous admixtures, 123–124  
Intravenous fluids, flow rate of, 124  
Intuitive/logical methods of conversion, 19  
Isotonicity  
  basic concepts, 89–90