



# Math Study Strategies

## Math for Nursing Dosage Medications

Depending on the type of the medication as well as on the method of administration, the nurse needs sometimes to round the answer resulted from the dimensional analysis computation.

### Parenteral Medications

If it is an intramuscular (IM), intradermic (ID) or subcutaneous (s.c) administered medication especially for pediatric, and the amount to be administered is less than 1 mL (or 1 cc) use, tuberculin syringe that is calibrated on **hundredths**.

Example: if the amount to be administered is **0.236** cc the nurse will be able to administer 0.24 cc.

*(look on the **hundredths** (3) if the following digit is  $\geq 5$  round up if it is  $\leq 5$  round down).*

**Standard** syringe is **3 cc** that allows to round to the nearest **tenth** and is used for medications which need more dilution and amount that exceed 1 cc.

**20 cc** and larger syringes are used for measurement of large volumes. They identify 0, 5, 10, 15, 20 cc volumes. The rounding is to these increments.

**5, 6, 10, 12 cc** syringes are calibrated in **fifths (two tenths)**.

Syringes larger than **12 cc** are calibrated in full cc measures.

**For Insulin**, only insulin syringes can be used. To prepare **U-100** strength needs to be used, U-100 calibrated syringe. **Low-Dose** syringe have a capacity of **30 U or 50 U**. Their scale is enlarged and easier to read. Each calibration measures **1 U** and each **5 U** increment is numbered.

There are syringes calibrated in **2 U** increments. Odd numbered units are measured between the even calibration. To read this type of syringe the nurse needs to count only one side of the syringe because each calibration measures **2 U**.

### Intravenous Medications

**When IV medication** is administered the flow rate needs to be counted as **whole** drops (ex 2.6 gtt will be rounded to 3 gtt) The number of minutes regarding the flow rate need to be also a whole number (2.25 min will be 2 min: 3.6 min will be rounded to 4 minutes)

### Oral Medication

**Tablets** can be administered as 1/2 tablet of **scored tablets** otherwise only whole numbers of tablets.