**Review of Math Calculations**

**Rules of rounding:**

If administering less than (<) 1 mL, round to nearest hundredth; a 1 mL syringe has calibrations to 0.01

**< 1 mL, round to nearest hundredth**

If administering (>)1 mL, round to nearest tenth; a 3 mL syringe has calibrations to 0.1

**>1 mL, round to nearest tenth**

**Leading zeros:** if an amount of medication is less than 1 mL, it must be written with a zero before the decimal point to prevent overdose of medication. Example: Give .5 mL = write 0.5 mL; .25 mg = write 0.25 mg

**Trailing zeros:** if amount of medication is a whole number, as 3 mL, do not write 3.0 mL to prevent potential overdose of medication

* Use this diagram when converting dosages within the metric system
* Move the decimal place **three places for each step!**

kg g mg mcg

. . . . . . . . . .

**Common Conversions**

**Weight:** 1 kg = 2.2 lbs

1 lb = 16 oz

**Length:** 1 inch = 2.54 cm

**For weight and height ALWAYS round to the tenths!**

**Volume: Important MUST remember:**

* **1 teaspoon (t) = 5 mL**
* **1 ounce (oz) = 30 mL**
* **1 Tablespoon (T) = 15 mL = 3 teaspoons**

**Concentration (per 1 mL)**

**Definition**

* **Concentration = Total Amount of Drug**

**Total Volume (mL)**

**Calculating flow rates**

* **2 definitions:**
  + **mL/hr – an infusion pump**
  + **gtt/min – manually counted (watch count)**

**Pump: mL/h**

* **> 1 hr: total mL = mL/hr**

**total hr**

* **< 1 hr: total mL x 60 min/hr = mL/hr**

**total min**

**Drops per Min: gtt/min**

* **total mL x drop factor gtt/mL = gtt/min**

**total min**