<u>**CONCEPT:**</u> <u>CONVERSION FACTORS (SIMPLIFIED)</u>

● **Conversion Factor**: a ratio or fraction that ties together _____ different units.

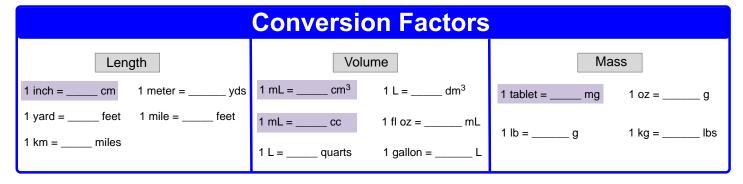   □ For example, a day is composed of 24 hours:

$$\underline{\hspace{4cm}} \quad \text{or} \quad \underline{\hspace{3cm}}$$

● **Given Amount**: a value containing only _____ unit.

    □ For example, we spent **3 hours** studying chemistry today.

> **EXAMPLE:** Clutch's "Ugly but Good" chocolate chip cookie recipe is always a hit at our office parties. My budget is $80. The recipe makes 18 servings for the party. Each serving requires 8 chocolate truffle chips at a cost of $0.50 per 5 chocolate truffle chips. From the information provided, determine the given amount and all conversion factors.

<u>**Common Conversion Factors**</u>

● The most common conversion factors deal with units involved with length, volume or mass.

Conversion Factors

Length	Volume	Mass
1 inch = _____ cm 1 meter = _____ yds	1 mL = _____ cm^3 1 L = _____ dm^3	1 tablet = _____ mg 1 oz = _____ g
1 yard = _____ feet 1 mile = _____ feet	1 mL = _____ cc 1 fl oz = _____ mL	1 lb = _____ g 1 kg = _____ lbs
1 km = _____ miles	1 L = _____ quarts 1 gallon = _____ L	

> **EXAMPLE:** While packing for a trip to Spain a traveler wishes to weigh their luggage to make sure it doesn't exceed 23 kilograms. Unfortunately their bathroom scale for some reason can only weigh in ounces. What conversion factors could they use to determine the mass of their luggage?

PRACTICE: A patient has approximately 83 mL of blood pumping by their heart at each beat. By assuming they have a pulse of 75 beats per minute it is calculated that the patient pumps 8.964×10^6 mL in one day. Identify the given amount and all conversion factors.

PRACTICE: For 7 hours, an intravenous bag delivers medication to a patient at a rate of 2.75 drops a second with a mass of 42 mg per drop. Identify the given amount and all conversion factors.

PRACTICE: The dispensing of prescription drugs are usually prescribed in units of mg per kg of body weight. A new prescription drug has a recommended dosage of 11 mg/kg. A 75 lb child requires three tablets each weighing 125 mg for their recommended dosage. Identify the given amount and all conversion factors.