

# Conversions extraPractice Q

Name: \_\_\_\_\_ Per: \_\_\_\_\_ Date: \_\_\_\_\_

Do not lose this list. Keep somewhere accessible. \*\*Memorize the bolded conversions below

**1 [base unit] = 100 centi = 1000 milli = 1,000,000 micro = 1,000,000,000 nano**

**1 kilo = 1000 [base unit]**

**Base Unit = grams, liters, or meters**

**16 oz = 1 lb = 453.6 g**

**2.54 cm = 1 inch**

**1 mL = 1 cm<sup>3</sup> = 1 cubic centimeter**

**1 mile = 5280 ft**

**1 yard = 36 inches = 3 ft**

**1 qt = 0.943 L = 0.25 gal**

*Complete each of the following calculations and show your work:*

How many grams are in 4.56 mg?

How many kiloliters are in 6,000,200 liters?

How many inches are in 18.9 m?

How many seconds are in 14.2 weeks?

How many gallons are in 312.3 ml?

How many pounds in 5.23 kg?

How many hours are in 7.00 years?

*You must try the Challenge problems! They are NOT extra credit, just challenging:*

Challenge: If aluminum has a density of 2.70 g/mL and you have a 7.86 gram block of it, what is the volume of the block? **in mL**

# Conversions extra practice 6

Name: KEY Per: \_\_\_\_\_ Date: \_\_\_\_\_

## Conversions WS #1

Do not lose this list. Keep somewhere accessible. \*\*Memorize the bolded conversions below

**1 [base unit] = 100 centi = 1000 milli = 1,000,000 micro = 1,000,000,000 nano**  
**1 kilo = 1000 [base unit]**

**Base Unit = grams, liters, or meters**

16 oz = **1 lb = 453.6 g**

**2.54 cm = 1 inch**

**1 mL = 1 cm<sup>3</sup> = 1 cubic centimeter**

**1 mile = 5280 ft**

**1 yard = 36 inches = 3 ft**

**1 qt = 0.943 L = 0.25 gal**

Complete each of the following calculations and show your work:

How many grams are in 4.56 mg?

$$4.56 \text{ mg} \left| \frac{1 \text{ g}}{1000 \text{ mg}} \right| = \boxed{4560 \text{ g}}$$

How many kiloliters are in 6,000,200 liters?

$$6000200 \text{ L} \left| \frac{1 \text{ KL}}{1000 \text{ L}} \right| = \boxed{6000.2 \text{ KL}}$$

How many inches are in 18.9 m?

$$18.9 \text{ m} \left| \frac{100 \text{ cm}}{1 \text{ m}} \right| \left| \frac{1 \text{ in}}{2.54 \text{ cm}} \right| = \boxed{744 \text{ in}}$$

How many seconds are in 14.2 weeks?

$$14.2 \text{ weeks} \left| \frac{7 \text{ days}}{1 \text{ week}} \right| \left| \frac{24 \text{ hr}}{1 \text{ day}} \right| \left| \frac{60 \text{ min}}{1 \text{ hr}} \right| \left| \frac{60 \text{ sec}}{1 \text{ min}} \right| = \boxed{8.59 \times 10^6 \text{ sec}}$$

How many gallons are in 312.3 ml?

$$312.3 \text{ mL} \left| \frac{1 \text{ L}}{1000 \text{ mL}} \right| \left| \frac{1 \text{ qt}}{0.946 \text{ L}} \right| \left| \frac{1 \text{ gal}}{4 \text{ qt}} \right| = \boxed{0.08253 \text{ gal}}$$

How many pounds in 5.23 kg?

$$5.23 \text{ kg} \left| \frac{1000 \text{ g}}{1 \text{ kg}} \right| \left| \frac{1 \text{ lb}}{453.6 \text{ g}} \right| = \boxed{11.5 \text{ lb}}$$

How many hours are in 7.00 years?

$$7.00 \text{ yrs} \left| \frac{365 \text{ days}}{1 \text{ yr}} \right| \left| \frac{24 \text{ hrs}}{1 \text{ day}} \right| = \boxed{61300 \text{ hrs}}$$

You must try the Challenge problems! They are NOT extra credit, just challenging:

Challenge: If aluminum has a density of 2.70 g/mL and you have a 7.86 gram block of it, what is the volume of the block? in mL

$$7.86 \text{ g} \left| \frac{1 \text{ mL}}{2.70 \text{ g}} \right| = \boxed{2.91 \text{ mL}}$$