

CONVERTING UNITS WITHIN THE METRIC SYSTEM

Converting units such as kilograms to grams or centimeters to decimeters is easy now that you know how to multiply and divide by multiples of ten.

Prefix	kilo (k)	hecto (h)	deka (da)	unit (m, L, g)	deci (d)	centi (c)	milli (m)
Meaning	1000	100	10	1	0.1	0.01	0.001

EXAMPLE 1: 2 L = _____ mL

$$2.\underline{000}L = 2000 \text{ mL}$$

Look at the chart above. To move from liters to milliliters, you move to the right three places. So, to convert the 2 L to mL, move the decimal point three places to the right. You will need to add zeros.

EXAMPLE 2: 5.25 cm = _____ m

$$\underline{00}5.25 \text{ cm} = 0.0525 \text{ m}$$

To move from centimeters to meters, you need to move two spaces to the left. So, to convert 5.25 cm to m, move the decimal point two spaces to the left. Again, you need to add zeros.

ACTIVITY 1

Convert the following measurements.

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|-----------------------|------------------------|-------------------------|
| 1. 35 mg = _____ g | 6. 32.1 mg = _____ kg | 11. 72.3 cm = _____ m |
| 2. 6 km = _____ m | 7. 17.5 L = _____ mL | 12. 0.003 kL = _____ L |
| 3. 21.5 mL = _____ L | 8. 4.2 g = _____ kg | 13. 5.06 g = _____ mg |
| 4. 4.9 mm = _____ cm | 9. 0.417 kg = _____ cg | 14. 1.058 mL = _____ cL |
| 5. 5.35 kL = _____ mL | 10. 2.057 m = _____ cm | 15. 564.3 g = _____ kg |

UNDERSTANDING TEMPERATURE

The three most common systems for measuring temperature are **Fahrenheit**, **Celsius**, and **Kelvin**. All three systems use the **degree** as the unit of temperature. One Celsius degree is equal to one Kelvin degree but neither is equal to one Fahrenheit degree. The major difference in these three systems of measurement is the location of the **zero point**. In the metric system, the standard system of measure for temperature is Celsius. In the SI system of measurement, Kelvin is the standard unit of **measure**.

In Fahrenheit, there are 180° between the boiling point and the freezing point of water.

In Celsius, there are 100° between the boiling point and freezing point of water.

There are 100 Kelvin between the boiling point and the freezing point of water.