

Making Metric Conversions

Metric Prefixes

Giga (G)

Mega (M)

Kilo (k)

Hecto (h)

Deka (dk)

Base

Deci (d)

Centi (c)

Milli (m)

Micro (*u*)

Nano (n)

Making conversions within the Metric System can be accomplished by simply moving the decimal point. To make metric conversions, you must answer two questions. First, "How many places do you move the decimal?" Second, "Do you move the decimal to the right or the left?"

Example 1: Convert from 0.025 kilometers (km) to ____ centimeters (cm)

Example 2: Convert from 375 micrograms (*ug*) to ____ milligrams (mg)

Step 1: How many places do you move the decimal?

Count the number of places from the units of the initial measurement to the units you want on the converted measurement. (The dashed lines represent places that don't have names so from milli to micro is 3 places not 1)

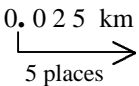
This is the number of places you will move the decimal.

Example 1: There are 5 places from km to cm. The decimal will move 5 places.

Example 2: There are 3 places from *um* to mm. The decimal will move 3 places.

Step 2: Do you move the decimal to the right or the left?

If you are converting from a larger unit to a smaller unit (down the table), you will need more small units to make up the same quantity. This means moving the decimal to the right. The number must get bigger.

Example 1: $0.025 \text{ km} \Rightarrow 2500. \text{ cm}$


If you are converting from a smaller unit to a larger unit (up the table), you will need fewer large units to make up the same quantity. This means moving the decimal to the left. The number must get smaller.

Example 2: $375. \text{ um} \Rightarrow 0.375 \text{ mm}$
