

Name \_\_\_\_\_

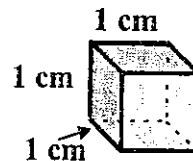
Metric Conversions

2.2

UNDERSTANDING GRAMS

The basic unit of mass in the metric system is the gram. Gram is abbreviated "g".

A gram is the mass of one cubic centimeter of water at 4°C.



A large paper clip has a mass of about 1 gram (1 g).

A nickel has a mass of 5 grams (5 g).

1000 grams = 1 kilogram (kg) = a little over 2 pounds

1 milligram (mg) = 0.001 gram. This is an extremely small amount and is used in medicine.

An aspirin tablet has a mass of 300 mg.

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

EXAMPLE 1: 2 L = \_\_\_\_\_ mL

2.000L = 2000 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

005.25 cm = 0.0525 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.

Solve the following problems.

1. 35 mg = \_\_\_\_\_ g
2. 6 km = \_\_\_\_\_ m
3. 21.5 mL = \_\_\_\_\_ L
4. 4.9 mm = \_\_\_\_\_ cm
5. 5.35 kL = \_\_\_\_\_ mL
6. 32.1 mg = \_\_\_\_\_ kg
7. 156.4 m = \_\_\_\_\_ km
8. 25 mg = \_\_\_\_\_ cg
9. 17.5 L = \_\_\_\_\_ mL
10. 4.2 g = \_\_\_\_\_ kg
11. 0.06 daL = \_\_\_\_\_ dL
12. 0.417 kg = \_\_\_\_\_ cg
13. 18.2 cL = \_\_\_\_\_ L
14. 81.2 dm = \_\_\_\_\_ cm
15. 72.3 cm = \_\_\_\_\_ m
16. 0.003 kL = \_\_\_\_\_ L
17. 5.06 g = \_\_\_\_\_ mg
18. 1.058 mL = \_\_\_\_\_ cL
19. 43 hm = \_\_\_\_\_ km
20. 2.057 m = \_\_\_\_\_ cm
21. 564.3 g = \_\_\_\_\_ kg