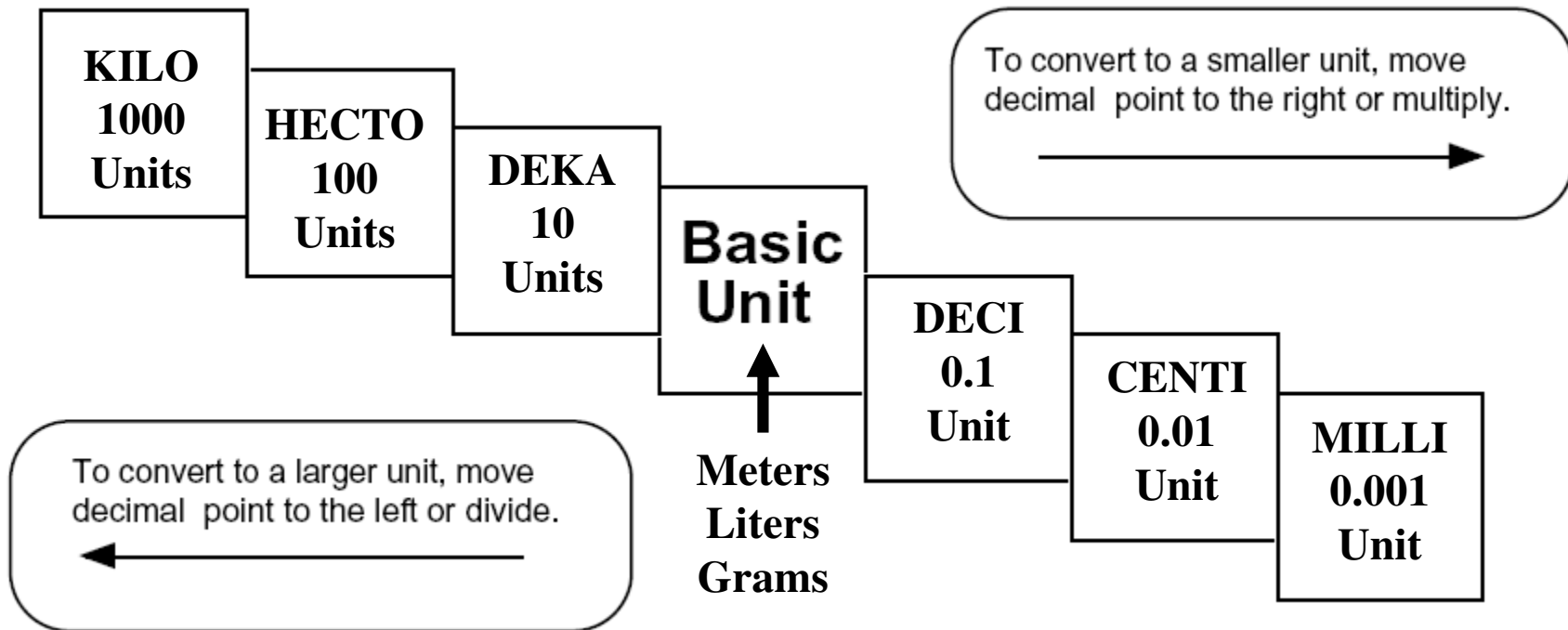


Metric Conversions: The Ladder Method

a.k.a. the “hop”
method

Ladder Method



Metric Abbreviations

The Prefixes

Kilo **K**

Hecto **H**

Deka **Dk** or **D**

deci **d**

centi **c**

milli **m**

**Never used
alone**

The Base Units

meter **m**

gram **g**

liter **L**

second **s**

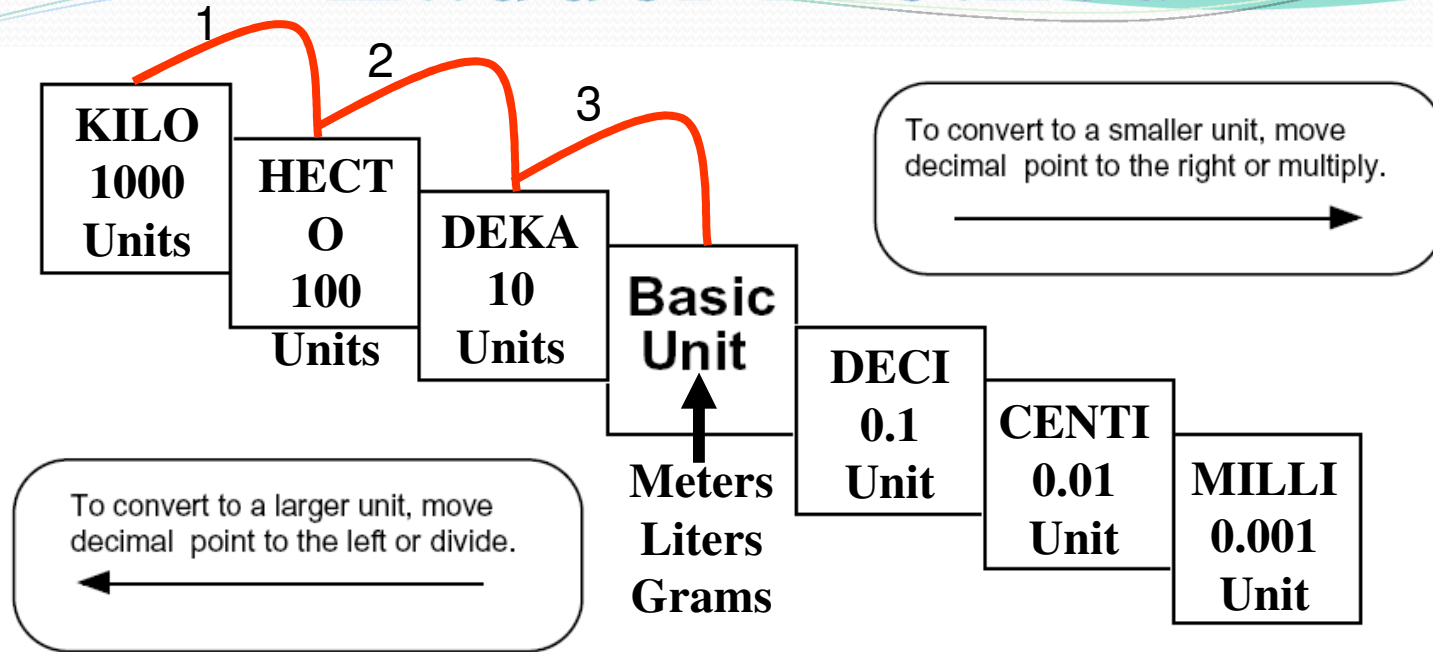
**Can stand
alone**

Watch out!

*If you see an “m” by itself,
what does it represent?*

*How is millimeters
abbreviated?*

Ladder Method



How do you use the “ladder” method?

- 1st – Determine your starting point.
- 2nd – Count the “jumps” to your ending point.
- 3rd – Move the decimal the same number of jumps in the same direction.
- 4th – Fill in your blank spaces with 0’s.

$$4 \text{ km} = \underline{\hspace{2cm}} \text{ m}$$

Starting Point Ending Point

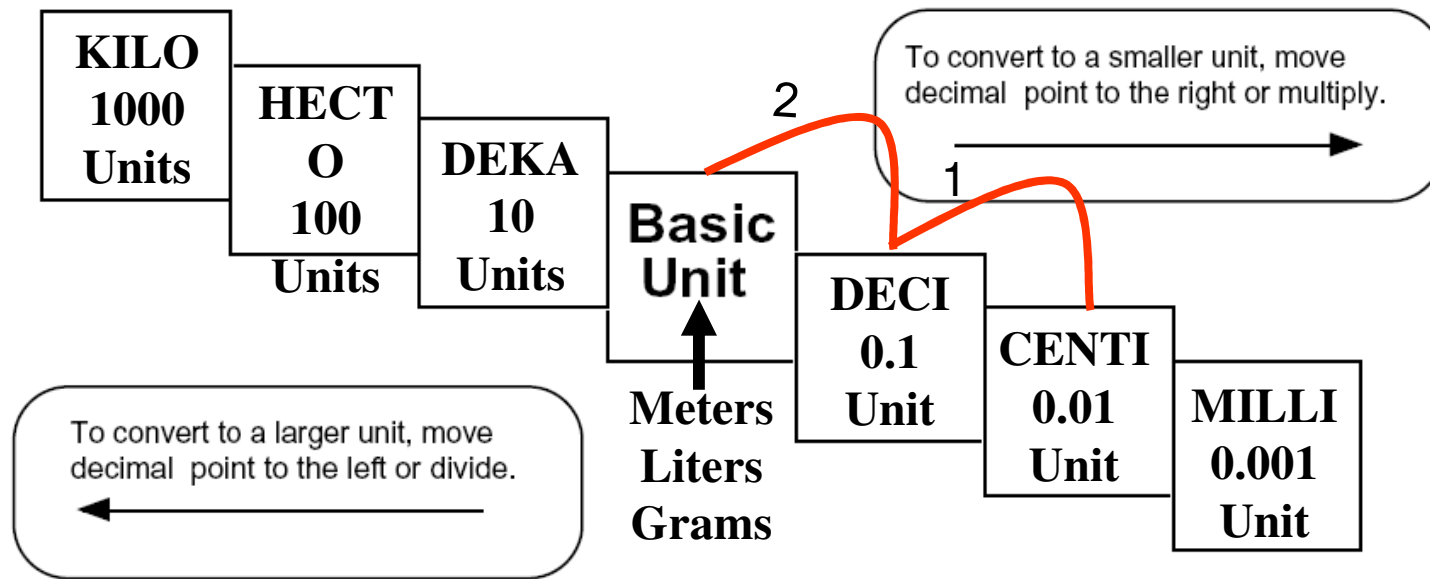
How many jumps does it take?

In which direction?

$$4 \text{ \underline{\hspace{0.5cm}} \underline{\hspace{0.5cm}} \underline{\hspace{0.5cm}} .} = 4000 \text{ m}$$

1 2 3

Ladder Method



How do you use the “ladder” method?

- 1st – Determine your starting point.
- 2nd – Count the “jumps” to your ending point.
- 3rd – Move the decimal the same number of jumps in the same direction.
- 4th – Fill in your blank spaces with 0’s.

$$10 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$$

Starting Point Ending Point

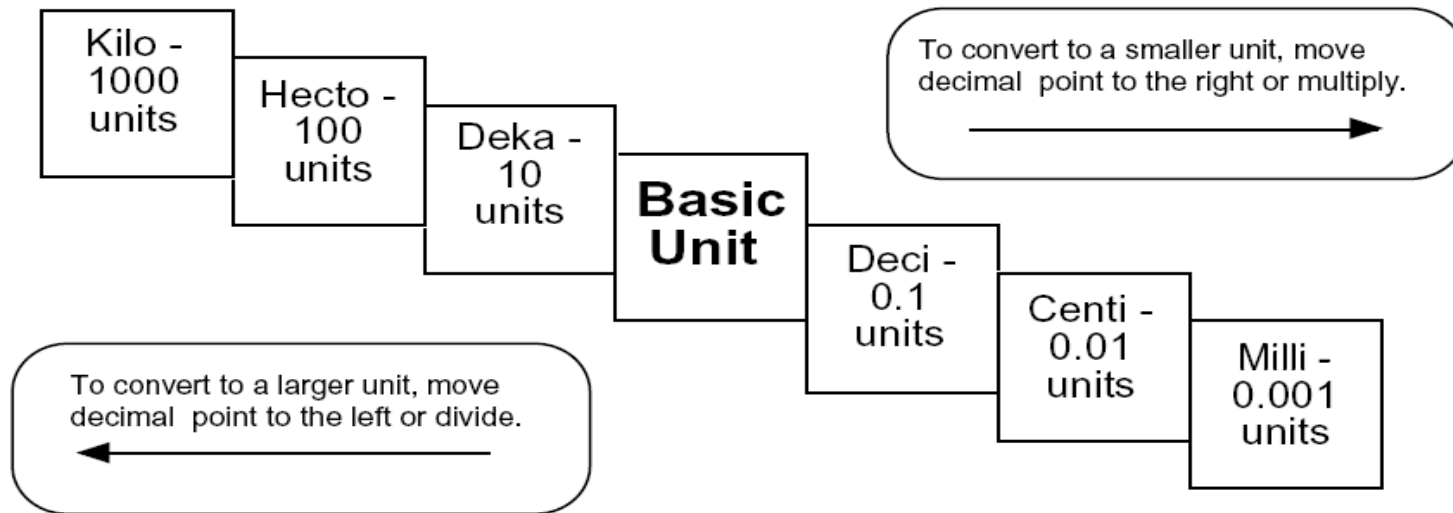
How many jumps does it take?

In which direction?

$$\underline{0} \underline{.} \underline{1} \underline{0} = 0.10 \text{ m}$$

2 1

Conversion Practice



Try these conversions using the ladder method.

$1000 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$

$1 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

$160 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$

$14 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

$109 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$

$250 \text{ m} = \underline{\hspace{2cm}} \text{ km}$

Compare using $<$, $>$, or $=$.

$56 \text{ cm} \bigcirc 6 \text{ m}$

$7 \text{ g} \bigcirc 698 \text{ mg}$

Conversion Practice

Write the correct abbreviation for each metric unit.

1) Kilogram _____

4) Milliliter _____

7) Kilometer _____

2) Meter _____

5) Millimeter _____

8) Centimeter _____

3) Gram _____

6) Liter _____

9) Milligram _____

Try these conversions, using the ladder method.

10) 2000 mg = _____ g

15) 5 L = _____ mL

20) 16 cm = _____ mm

11) 104 km = _____ m

16) 198 g = _____ kg

21) 2500 m = _____ km

12) 480 cm = _____ m

17) 75 mL = _____ L

22) 65 g = _____ mg

13) 5.6 kg = _____ g

18) 50 cm = _____ m

23) 6.3 cm = _____ mm

14) 8 mm = _____ cm

19) 5.6 m = _____ cm

24) 120 mg = _____ g

Conversion Practice

Compare using $<$, $>$, or $=$.

25) 63 cm 6 m

27) 5 g 508 mg

29) 1,500 mL 1.5 L

26) 536 cm 53.6 dm

28) 43 mg 5 g

30) 3.6 m 36 cm