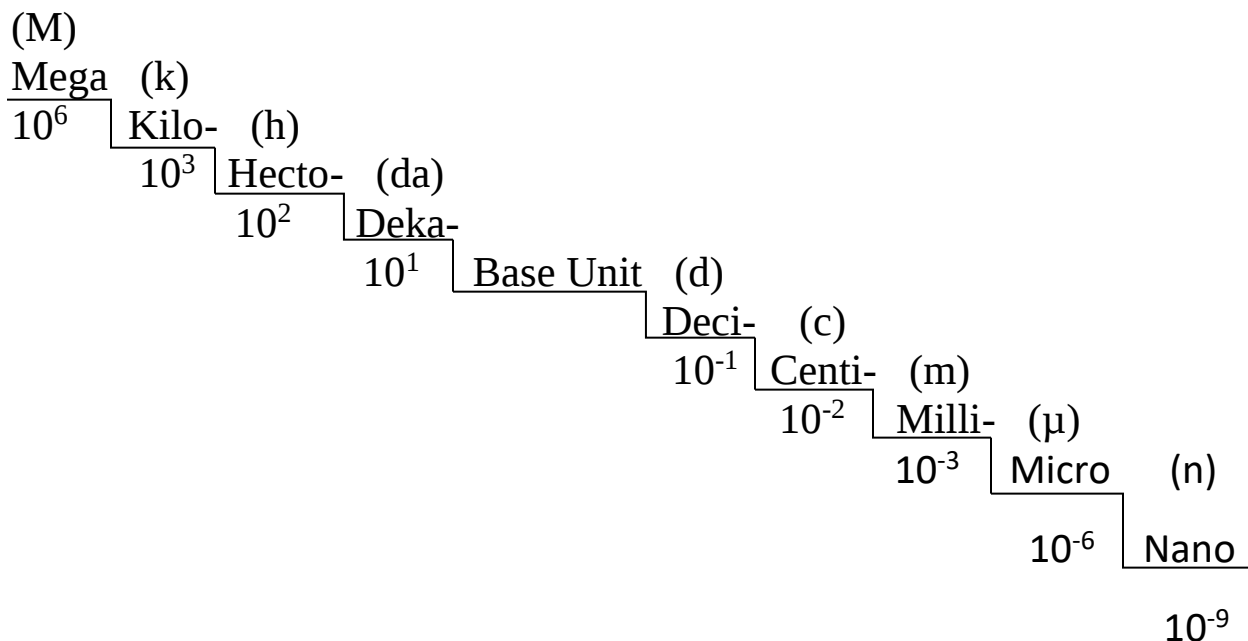


Lesson 3: International system of units (SI units)

Hebden has a chart for quick reference of the prefix system for units on page 18.

Metric Conversion: Stair-Step Method



Q: What are some of the base units?

A: For volume: L

For length: m

For mass: g

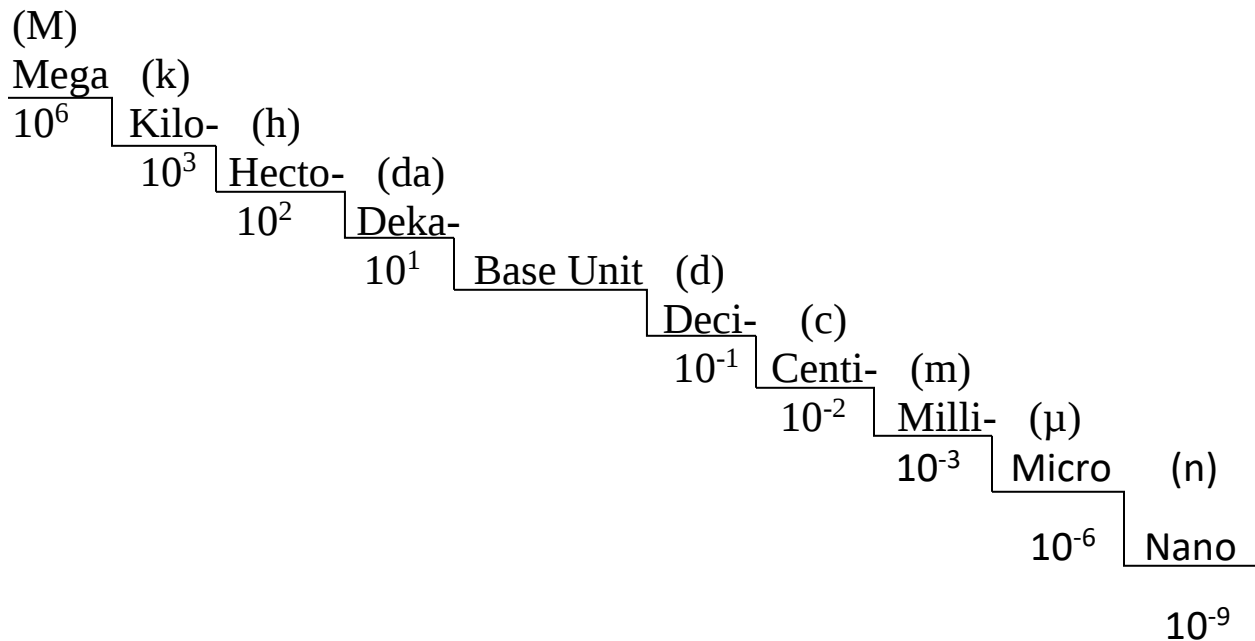
For time: s

For large number of things: mol

For temperature: K (To convert to $^{\circ}\text{C} = \text{K} - 273.15$)

Orally: The staircase above (which lists the prefixes we will use most often) shows that the prefix system is based on powers of 10. You must memorize these.

Metric Conversion: Stair-Step Method



Step #1: Find the prefix the original measurement starts with (if none is given, it is a base unit)

Step #2: Find the prefix you wish to convert to.

Step #3: Count the number of steps and the direction. This is the number of times and direction you must move the decimal.

Exercises: Convert each of the measurements

- 5 dm = _____ m
- 4 mL = _____ L
- 8 g = _____ mg
- 9 mg = _____ μ g
- 2 mL = _____ L
- 6 kg = _____ g
- 4 cm = _____ m
- 12 mg = _____ ng
- 7.02 mL = _____ dL
- 0.03 hg = _____ dag
- 6035 daL = _____ cL
- 0.32 m = _____ hm
- 38.2 Mg = _____ kg