

The phrase “reference unit” refers to any mental image or concept that an individual uses to represent the size of a measuring unit. Here are a few of the most common reference units:

Length:

- 1 mm is roughly the thickness of a paperclip wire.
- 1 cm is roughly the width of a paperclip or of your pinky.
- 1 m is roughly the height of a doorknob from the floor.
- 1 km is roughly the distance from our classroom to McDonald’s.
- 1 km can also be thought of as how far you can stroll in 5-7 minutes.

Weight:

- 1 mg is roughly the weight of 3 grains of sand.
- 1 g is roughly the weight of a paperclip.
- 1 kg is roughly the weight of 3 cans of pop.

Volume:

- 1 *ml* is roughly the volume of your pinky fingertip, from the base of your nail on.
- 1 *l* is half of a 2-liter bottle.
- 1 *kl* is roughly the volume of a bathtub.

Temperature:

- Water freezes at 0° C or 32° F.
- Water boils at 100° C or 212° F.
- Body temperature is roughly 40° C or 100° F.
- Room temperature is roughly 20° C or 70° F.

Rough comparisons between metric and customary units:

- A yard is a *little less* than a meter.
- A quart is a *little less* than a liter.
- A pound is *about half* of a kilogram.
- A kilometer is *about half* of a mile.
- A centimeter is *about half* of an inch.