

# Metric Reference Points Worksheet

Sometimes, people will be reluctant to start using metric measures because they are already familiar with so many measures in an old system. The solution is to convert the old measures into metric, and to then get accustomed to the new numbers.

## How much is a meter?

A meter is about the distance between the floor and a doorknob. For the following measurements, first try to estimate the number and then either measure it or calculate it to find the actual value. The table will mix measurements in millimeters, centimeters, meters, and kilometers. You should eventually be comfortable switching between them, and should be able to visualize the lengths from the number.

$$\text{cm} = 2.54 * \text{inches}$$

$$\text{mm} = 25.4 * \text{inches}$$

$$\text{m} = 3.28 * \text{feet}$$

$$\text{km} = 1.6 * \text{miles}$$

Computer monitor (length of the diagonal)	cm
Height of the ceiling	m
My height	cm
The margins of this page	mm
The dimensions of this paper	mm by mm
The dimensions of my house or apt. complex	m by m
The size of the lot on which the house sits	m by m
The biggest snowfall I can remember	cm
Distance to the grocery store	m
Distance to the grocery store	km
Distance to work or school	km

## How much are a square meter and a hectare?

A hectare (ha) is the area of a square 100 m on a side, so it is 10,000 m<sup>2</sup>.

Area of the cover of a book	m <sup>2</sup>
Area of the tabletop	m <sup>2</sup>
Area of this room	m <sup>2</sup>
Area of my house or apartment (floor space)	m <sup>2</sup>
Area of the lot on which the house sits	m <sup>2</sup>
Area of the lot on which the house sits	ha

### How much are a liter and a cubic meter?

A cubic meter is one thousand liters, so you can switch between these two measures based on what you think is appropriate in a situation. For example, if your refrigerator has a capacity of 550 liters, you know that it is about half of a cubic meter. That may be easier to visualize at first.

Capacity of my refrigerator	L
Capacity of my washing machine	L
Capacity of my bathtub	L
Volume of this room	m <sup>3</sup>
Volume inside the car trunk	L
Capacity of suitcase	L
Volume of the space underneath the kitchen table	m <sup>3</sup>
Volume of my house or apartment	m <sup>3</sup>
The amount of water my family uses in a month	kL

### How much is kilogram?

A kilogram is how much a liter of water weighs. A metric ton (t) is one thousand kilograms.  
kilograms = pounds \* .4536

My weight	kg
How much I can bench press	kg
A heavy backpack	kg
A bag of flour or sugar	kg
A car	kg
A car	t
My friend's weight	kg

### How much does a newborn baby weigh?

The first time you hear a baby's weight in grams, it may not mean much to you. That can be changed! Find out how much you and your family members weighed at birth and convert to grams to become comfortable with using grams for this. **Normal birth weight is between 2500 g and 4000 g.**

Weight in grams = (pounds times 16, plus ounces) times 28.35. You will want to round to the nearest 10, 25, or 50 g.

Me	g
	g
	g

	g
	g
	g