

# TOPIC C: SYSTEMS OF MEASUREMENT

## NUMBER LINE/PLACE VALUE CHART

PLACE VALUE FOR WHOLE NUMBERS									PLACE VALUE FOR DECIMALS								
MILLIONS			THOUSANDS			ONES											
<i>Hundreds</i>	<i>Tens</i>	<i>Ones</i>	<i>Hundreds</i>	<i>Tens</i>	<i>Ones</i>	<i>Hundreds</i>	<i>Tens</i>	<i>Ones</i>		<i>Tenths</i>	<i>Hundredths</i>	<i>Thousandths</i>	<i>Ten Thousandths</i>	<i>Hundred Thousandths</i>	<i>Millionths</i>	<i>Ten Millionths</i>	<i>Hundred Millionths</i>
9	8	7	6	5	4	3	2	1	•	1	2	3	4	5	6	7	8

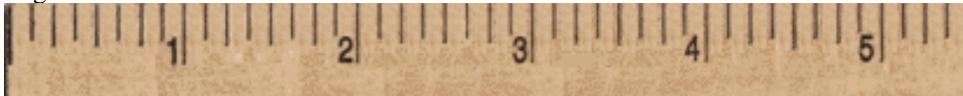
### METRIC AND ENGLISH RULERS

Metric rulers measure with centimeters and millimeters.



The larger lines with numbers are centimeters, and the smallest lines are millimeters. Since millimeters are 1/10th of a centimeter, if you measure 7 marks after a centimeter, it is 1.7 centimeters long.

English rulers measure with fractions. This ruler is marked 1/8ths of an inch.



The center mark between numbers is 1/2.

The next smallest marks on a ruler are 1/4ths.

The next smallest marks on a ruler are 1/8ths.

The next smallest mark, if there are any, are 1/16ths.

- When marking down a distance from a ruler, mark the whole inch, followed by a space, then the fraction of an inch. For example, 1 1/2, or 2 3/8.
- When entering fractions into the conversion calculators, you have to separate the whole number and the fraction with a + sign. For example, 1+1/2, or 2+3/8.

**SYSTEMS OF MEASUREMENT:** tables below show some common systems of measurements used every day.

#### Units of Length (Distance)

12 inches (in) = 1 foot (ft)

3 feet (ft) = 1 yard (yd)

1760 yards = 1 mile (mi)

#### Units of Weight (Mass)

16 ounces (oz) = 1 pound (lb)

2,000 pounds (lb) = 1 ton (T)

#### Units of Volume

8 fluid ounces (fl oz) = 1 cup (c)

2 cups (c) = 1 pint (pt)

2 pints (pt) = 1 quart (qt)

4 quarts (qt) = 1 gallon (gal)

#### Metric Units of Length

10 millimeters = 1 centimeter (cm)

100 centimeters = 1 meter (m)

1000 meters = 1 kilometer (km)

#### Metric Units of Weight

1000 milligrams (mg) = 1 gram (g)

1000 grams = 1 kilogram (kg)

1000 kilograms = 1 metric ton (T)

#### Metric Units of Volume

1000 milliliters (mL) = 1 liter (L)

1000 liters = 1 kiloliter (kL)

#### Metric to standard Length Conversion

##### Metric Units Standard Units

1 millimeter = 0.03937 inch

1 centimeter = 0.3937 inch

1 meter = 39.37 inches (3.2808 feet or 1.09 yards)

1 kilometer = 0.62 miles (3,280.8 feet or 1093.6 yards)

**BM30**

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