Measurements

Measurements are comparisons of properties against accepted standards, called units.

ENGLISH / US SYSTEM OF UNITS:

1 foot = 12 inches 1 yard = 3 feet 1 mile = 
$$1760$$
 yards  
 $5280$  Feet = 1 mile

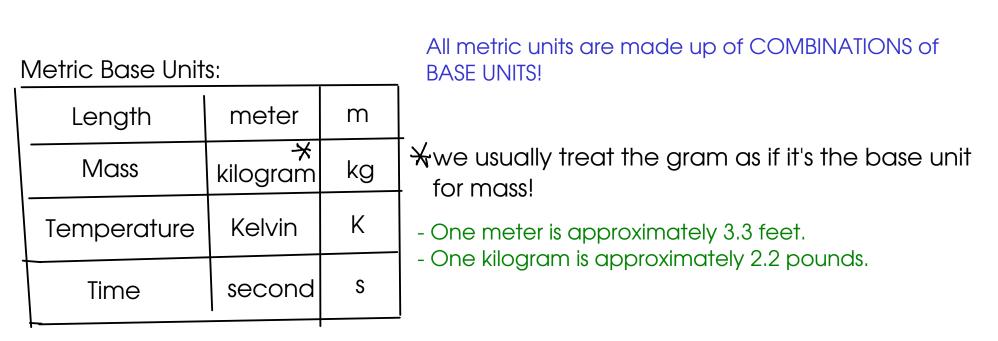
So what's the problem?

The English system of units is a mess. English units for the same kind of measurement do not relate to one another in meaningful ways. This makes the English system difficult to memorize and use.

Each kind of unit has its own conversion factors There's no consistency between (for example) length and mass units.

English units are nonstandard and difficult to use. Solution?

## THE METRIC SYSTEM



Metric units may be made larger or smaller by adding PREFIXES.

A few common metric prefixes:

mega-	10 6	Μ	Bigger units
kilo-	10 <sup>3</sup>	k	
centi-	-~~ 10	С	
milli-	10~3	m	smaller units
micro-	10 -6	M	

MEMORIZE the common metric prefixes listed in the study guide

Applying prefixes

$$\int m = m = m \left( \frac{1}{100} m \right)$$

$$\int m = 10^{-2} m \left( \frac{1}{100} m \right)$$

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