

## Instructions:

Read the following information and use it or the links provided to answer the questions.

In the United States, we use a system known as the U.S. customary system (also known as the standard or imperial system). Most of the rest of the world uses the metric system. The U.S. customary system and metric system both measure length, weight, and volume.

The U.S. customary system measurements for length, weight, and volume are as follows:

<b>Length:</b> 1 foot (ft) = 12 inches (in) 1 yard (yd) = 3 feet 1 mile (mi) = 5280 feet 1 mile = 1760 yards	<b>Weight:</b> 1 pound (lb) = 16 ounces (oz) 1 ton = 2000 pounds	<b>Volume:</b> 1 tablespoon (tbsp) = 3 teaspoons (tsp) 1 cup (c) = 16 tablespoons 1 cup = 8 fluid ounces (oz) 1 pint (pt) = 2 cups 1 quart (qt) = 2 pints 1 gallon (gal) = 4 quarts
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The metric system measurements for length, weight, and volume are as follows:

Prefix	Meaning	Length	Mass	Capacity
kilo-	thousand (1,000)	<u>kilometer</u>	<u>kilogram</u>	<u>kiloliter</u>
hecto-	hundred (100)	<u>hectometer</u>	<u>hectogram</u>	<u>hectoliter</u>
deka-	ten (10)	<u>dekameter</u>	<u>dekagram</u>	<u>dekaliter</u>
*base unit	ones (1)	meter	gram	liter
deci-	tenths (0.1)	<u>decimeter</u>	<u>decigram</u>	<u>decliter</u>
centi-	hundredths (0.01)	<u>centimeter</u>	<u>centigram</u>	<u>centliter</u>
milli-	thousandths (0.001)	<u>millimeter</u>	<u>milligram</u>	<u>milliliter</u>

The metric system is a decimal based system using the prefixes above to make its units either larger or smaller than the base unit (meter, gram, liter).

Conversions are quickly made by multiplying or dividing by factors of 10. It is as simple as moving the decimal point to the right (for smaller prefixes) or to the left (for larger prefixes). For example, if a length you measure is 10 meters, you would call it a decameter and say the length was 1 decameter.

Using the information above or the links below, answer the following questions.

U.S. Customary or Standard measurement:

<https://www.youtube.com/watch?v=lu6YaZoh4ec>

Metric System:

[https://www.youtube.com/watch?v=1TICcW\\_mugs](https://www.youtube.com/watch?v=1TICcW_mugs)

U.S. Customary (Standard) and Metric measurement:

<https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-measurement-topic/cc-5th-unit-conversion/v/u-s-customary-and-metric-units>

## Part A: Comparing Measurement Systems

Match each basic unit of measurement with the property it is used to measure.

Gram	Liter	Meter
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1. \_\_\_\_\_ is a unit of measure for length.
2. \_\_\_\_\_ is a unit of measurement for volume.
3. \_\_\_\_\_ is a unit of measurement for mass.

Compare the units of measurement for the U.S. customary system of measurement and the international system of measurement (metric system) by matching the units that are the most similar.

**Metric System**

- \_\_\_\_ 4. liter
- \_\_\_\_ 5. centimeter
- \_\_\_\_ 6. meter
- \_\_\_\_ 7. kilogram
- \_\_\_\_ 8. gram
- \_\_\_\_ 9. kilometer

**U.S. Customary System**

- a. yard
- b. pound
- c. quart
- d. inch
- e. mile
- f. ounce

**Part B: Converting**

Find the equivalent measurement of each given unit.

	Unit	Equivalent Measurement
10.	1 gram (g)	_____cg
11.	1 gram (g)	_____mg
12.	1 kilogram (kg)	_____g

### Part C: Matching

Match the object with the metric unit that is the best choice for measuring it.


#### Object

#### Metric Unit

- |  |                   |
|--|-------------------|
| _____ 13. The volume of liquid in a big bottle of soda pop | a. kilometer (km) |
| _____ 14. The mass of a large dog                          | b. meter (m)      |
| _____ 15. The distance from Minnesota to Hawaii            | c. liter (L)      |
| _____ 16. The width of a bedroom                           | d. gram (g)       |
| _____ 17. The mass of a small apple                        | e. kilogram (kg)  |

### For fun:

Here is a conversion chart between Standard and Metric units!



Customary Units	Metric Units
1 Inch	2.54 Centimeters
1 Foot	30.48 Centimeters
1 Yard	0.914 Meter
1 Mile	1.609 Kilometers
1 Ounce	28.350 Grams
1 Pound	454 Grams
1 Fluid Ounce	29.574 Milliliters
1 Quart	0.946 Liters
1 Gallon	3.785 Liters

