

Yesterday's conversions all moved to bigger units. Today is the opposite but just as simple.

Complete the table

Start value	Conversion factor	Answer units
33.km		_____ meters
6.2 hectoliters		_____ liters
6.2 liters		_____ ml
52 kg		_____g
52 kg		_____mg
52 kg		_____decigrams
8.6 m		_____mm
42 cm		_____mm
2000 kiloliters		_____ ml
52 decagrams		_____ mg

Cross Systems

Now it is time to convert units across different systems. The conversion factors are varied and unusual since they are not commonly known. For most part will stay with the common conversions but for math-exercise purposes the last few will be either unusual or multi-step conversions.

Complete the table

US Standard Measure	Conversion Factor	Metric Answer
150 lbs		_____ kg
47 oz		_____ g
6.2 tons		_____ metric tons
150 miles		_____ km
47 yards		_____ m
6.2 feet		_____ cm
9.7 inches		_____ mm
47 feet		_____ m
1.6 gallons		_____ liters
150 fluid ounces		_____ ml
47 quarts		_____ liters
150 cubic feet		_____ cubic meters

Metric to US Standard

You will need to find a chart of the conversion factors or a conversion calculator app/web site that gives you the conversion factors also.

Complete the table

Metric Measure	Conversion factor	US Unit answer
161 km		_____ miles
2.54 cm		_____ inches
1 m		_____ inches
11m		_____ yards
22m		_____ feet
2.54 kg		_____ pounds
2200 kg		_____ tons
47 g		_____ oz
2.54 kg		_____ oz
50 ml		_____ fluid oz
11 liters		_____ quarts
150 kiloliters		_____ gallons
2 liters		_____ oz
2 liters		_____ gallons

Unit Conversion Word Problems

1. Clyde is currently 142 cm long. If the giant grows at a rate of 4% each day how long, in inches, will it be at the end of four days?

Day	Length	+ 4% Growth	New Length	Convert to inches
0	142 cm	5.68	147.68 cm	
1	147.68 cm			
2				
3				
4				

2. On the Northside of our gym the bleachers are 22 meters long. There are 1.33 meter stairways where students can not sit. If the average student uses 22 inches to sit, how many students should be able to sit in each row on the Northside of our gym?
3. Explain how you arrived at your answer for number 2. NO numbers or number words can be used.

Conversion Word Problems

1. Our Clothes Closet had donated a 47.5 lbs box of socks. If the box weighed 3.5 lbs and each sock weighs 22 grams, how many pairs of socks did they receive?
2. Cooking is a common place for conversions. You found a very good recipe for BBQ from France. Unfortunately the measurement are all in metric. Your measuring cups, spoon, etc are all US Standards so you must convert to make the BBQ.

5 kg of beef or pork	_____ lbs
1/2 kg of bacon	_____ lbs
0.25 liters of honey	_____ cups
0.5 liters of Heinz Smokey BBQ Sauce	_____ cups
50 ml of Worcestershire sauce	_____ cups
5 ml of Cholula Hot Sauce	_____ tsp

Show all work

3. Explain your work, as usual without numbers or number words, for problem number 1