

CHM 100

Measurement & Problem Solving Exercises

Problems: Use the conversion factors on the right. Perform the following conversions.

- 47.0 g to kg
- 543 ml to L
- 0.45 km to m
- 0.96 L to ml
- 7.0 lbs. to g
- 0.456 kg to mg
- 3.5 yd to cm
- 4.6 qt. to L
- 1135 cm to m
- 7.0 L to qts.
- 0.81 kg to g
- 2575 mm to cm
- 45.0 lbs. to kg
- 0.212 qts. To ml

CONVERSION FACTORS

1kg	=	1000 g
1g	=	1000 mg
1L	=	1000 ml
1m	=	1000 mm = 100 cm
1km	=	1000 m
454 g	=	1 lb.
2.54 cm	=	1 in.
1.06 qt.	=	1 L
5280 ft	=	1 mile
1 ton	=	2000 lbs
16 oz	=	1 lb

- What is the distance in feet, between NSU and ODU? They are 2.5 miles apart.
- Bamboo can grow as much as 3.0 feet in 24 hours. At that rate, how many feet will it grow in 50 hours?
- How many ounces are in 0.65 tons?
- How long will it take to travel the 305 miles between Norfolk and New York at an average of 65 miles per hour?
- A tricycle manufacturer plans to produce 2500 tricycles per month over a 6 month period. How many wheels must be produced for the entire run?
- What is the cost of nails for a fence 250 feet long if you need 12 nails per foot of fence, there are 42 nails in a pound, and they sell for 25 cents per pound? Answer in dollars.
- Quarters are silver plated in batches averaging 95 lbs. each. If the plating cycle is 18 minutes for each batch, and the cost of operating the system is \$ 25 per hour, what is the cost of plating one pound of quarters? Express the answer in cents.
- Silver plated trinkets are sold for \$ 1.85 per pound. There is an average of 75 trinkets per pound. What is the maximum number of trinkets that can be purchased for sixty dollars?
- The density of gold is 19.3 grams per cubic centimeter (cm^3). If a gold rod had a volume of 50 cm^3 , what would it weigh (in grams)? In pounds?
- The density of silver is 10.5 grams per cubic centimeter (cm^3). What volume (cm^3) would 454 grams of silver occupy?