

CHEMISTRY - DIMENSIONAL ANALYSIS WS

- Convert:
 - 3.5 liters to cubic centimeters
 - 0.75 kilograms to milligrams
 - 1500 millimeters to kilometers
 - 1.00 day to seconds
 - 5000 cubic centimeters to milliliters
 - 0.52 kilometers to meters
 - 65 grams to kilograms
 - 750 micrograms to grams
 - 0.25 megameters to centimeters
- Calculate the number of minutes in the entire month of May.
- A sign in a town gives the speed limit at 50 km/hr. What is this speed in centimeters per second?
- A chemistry instructor provides each student with 8 test tubes at the beginning of the school year. If there are 28 students per class, how many test tubes are required for three chemistry classes?
- Near a lake on an old building a sign reads, "Rowboats for rent, 1.75 per half-hour." What will it cost to rent a rowboat for five hours?
- In your favorite restaurant, a sandwich you like costs \$1.25. If you order two sandwiches, how many quarters must you pay? How many dimes?
- A young child is sent to a store with exactly \$3.00 to buy donuts. If the donuts on a special sale cost 95 cents per dozen, how many donuts can be bought? Assume the baker will sell individual donuts.
- What is the cost in dollars for the nails used to build a fence 125 meters long if it requires 30 nails per meter? Assume 40 nails are sold per box at a cost of 75 cents per box.
- Determine the volume that 35.2 grams of carbon tetrachloride will occupy if it has a density of 1.60 g/cm³.
- The density of ethanol is 0.789 g/cm³ at 20 °C. What is the mass of 150 cm³ of this alcohol?

11. A block of lead measures 20.00 mm X 30.00 mm X 45.00 mm. Calculate the mass of this block, if the density of lead is 11.34 g/cm³.
12. A light year is the distance that light can travel in one year. If the sun is 150,000,000 kilometers away, how many light years is the sun from the earth? Assume that light travels at a speed of 3.0×10^{10} cm/s.
13. The angstrom (Å) is a unit of length used for measuring small dimensions such as the diameters of atoms. $1 \text{ Å} = 1 \times 10^{-10} \text{ m}$. If the diameter of an atom is 3 Å, calculate this value in millimeters. In kilometers.

EXTRA CREDIT:

If a cat and a half eats a rat and a half in a day and a half, how many pancakes does it take to shingle a dog house?