

Exam I Warm-up Problems - Chemistry I

1. $121.0^{\circ}\text{C} = \underline{\hspace{2cm}}^{\circ}\text{F}$ 2. $11.0^{\circ}\text{F} = \underline{\hspace{2cm}}^{\circ}\text{C}$

3. $2700 \text{ cm} = \underline{\hspace{2cm}} \text{ miles}$ 4. $6.0 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ m}^3$

5. Write the following in scientific notation:
 $128,100,000,000 = \underline{\hspace{3cm}}$
 $0.0000004610 = \underline{\hspace{3cm}}$

6. Write the following in normal notation:
 $4.20 \times 10^{12} = \underline{\hspace{3cm}}$
 $2.70 \times 10^{-7} = \underline{\hspace{3cm}}$

7. What is the density of a metal that has a mass of 3600g and occupies a volume of 400.0mL?

8. If a material has a density of 4.0 g/cm^3 , how much mass would 300.00 cm^3 of the material have?

9. How many protons, how many neutrons, and how many electrons are there in an atom of strontium-88 (^{88}Sr)?

10. Describe the differences between atomic number, atomic weight, and mass number.

11. How many g/cm^3 are equivalent to 150 lbs/ft^3 ?

12. Describe the differences between Fahrenheit, Celsius, and Kelvin thermometers. Between gases, liquids, and solids. Between homogeneous and heterogenous mixtures.

Complete the Table

<u>Formula</u>	<u>Name</u>	<u>Formula</u>	<u>Name</u>
HClO_4		Na^{+1}	
SrO		SO_4^{-2}	
$\text{Mg}(\text{ClO}_2)_2$		Fe^{+2}	
P_2O_5			
	Sodium Iodide		Copper (II) ion
	Sulfur Trioxide		Zinc ion
	Calcium Hydroxide		Magnesium
	Sulfurous Acid		Nitrite ion