Metric Conversion # 4
(*Show set-up and express the answer in Scientific Notation Standard Form.*)

8. An analysis of 10.5 ml sample of a solution of Ferric Sulfate ($Fe_2 (SO_4)_3$) showed that there were .25 g of Ferric Sulfate present. The total mass of the sample of the solution was 11.25 grams. What is the density of the solution in **g/cm^3** ?

9. The density of a material is 6.789 g/cm^3 . What is the density in **mg/hm^3** ?

10. A cylindrical container measures 4.50 cm in diameter and .725 dm in length. The container alone has a mass of 75.0 grams. The cylinder is filled with a liquid and the final mass of the liquid and the cylinder is 288.3 grams.

    a) What is the density of the liquid in **g/cm^3** ?

    b) Using the answer for part (a) find the density of the liquid in **mg/dm^3** ?

11. A student underwent a routine blood test. The blood test revealed the student's cholesterol level to be 2.35 g/dm^3. When his physician received the results of the blood test, the cholesterol test was expressed in the standard units of **mg/dl**. What was the results of the student's cholesterol level in **mg/dl**?

12. A flat rectangular piece of Aluminum has the dimensions of L = 13.0 cm and W = 11.0 cm. The area has been calculated to be 1.43 dm^2. The mass of the Aluminum piece was found to be 3.500 grams. The known density of Aluminum metal is D = 2.699 g/cm^3. What is the thickness of the piece of Aluminum metal in **decimeters**?