CHM 151 Quiz 1a 25 Pts	Fall 2008	Name: Kee	
		1,400	

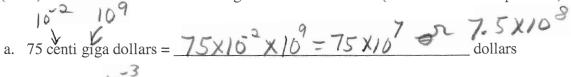
Show All Work To Receive Credit! Conversion factors and prefixes are given below:

 $G=10^9, M=10^6, k=10^3, c=10^{-2}, m=10^{-3}, \mu=10^{-6}, n=10^{-9}, 2.54 \text{ cm}=1 \text{ in}, 12 \text{ in}=1 \text{ ft}, 5280 \text{ ft}=1 \text{ mile}, 3 \text{ feet}=1 \text{ yd}, 60 \text{ sec}=1 \text{ min}, 1 \text{ hr}=60 \text{ min}, 1000 \text{ mL}=1 \text{ L}$

1. (6 Pts) How many milli-feet are there in 475 kilo-inches?



2. (4 Pts) Convert each of the following to scientific notation (without the use of prefixes):



b.
$$3.0 \times 10^4 \,\text{mL} = 3.0 \times 10^4 \,\text{M} = 3.0 \times 10^4 \,\text{mL}$$

3. (5 Pts) A car engine size is listed as 4.0 L cubic inches (in³): What would its size be in cubic inches (in³)?

4. (5 Pts) The following <u>measurements</u> were taken for the perimeter of a rectangle. Calculate the perimeter of the rectangle and express the answer with the proper number significant figures. <u>Measurements</u>: 167.37 cm, 168.11 cm, 35.2 cm, 34.976 cm.

$$\frac{167.37}{168.11}$$
 $\frac{1}{35.2}$ $\frac{2}{34.976}$ $\frac{1}{405.656}$ cm = $\frac{405.7}{200}$

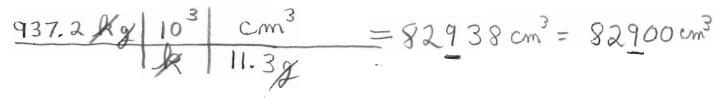
5. (5 Pts) The density of gold is 19.3 g/cm³. What would be the volume of 937.2 kg of Au? Be sure to watch the significant figures.

$$937.2 \text{ kg} 10^3 \text{ cm}^3 = 48559.58 = 48650 \text{ cm}^3$$

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 $G=10^9,\,M=10^6,\,k=10^3,\,c=10^{-2},\,m=10^{-3},\,\mu=10^{-6},\,n=10^{-9},\,2.54\,\,cm=1\,\,in,\\12\,\,in=1\,\,ft,\,5280\,\,ft=1\,\,mile,\,3\,\,feet=1\,\,yd,\,60\,\,sec=1\,\,min,\,1\,\,hr=60\,\,min,\,1000\,\,mL=1\,\,L$

1. (5 Pts) The density of lead is 11.3 g/cm³. What would be the volume of 937.2 kg of Pb? Be sure to watch the significant figures.



2. (4 Pts) Convert each of the following to scientific notation (without the use of prefixes):

a. 33.0×10^{-9} millimeters = $33.0 \times 10^{-9} \times 10^{-3} = 33.0 \times 10^{-9}$ meters

b. 889 kilo giga dollars = 889×10^{12} or 9.89×10^{14} dollars

3. (5 Pts) A car engine size is listed as 3.5 Liters. What would its size be in cubic inches (in³)?

3.5 / 1000 cm 13 in 3 = 213 in 3 = 210 in 3

4. (6 Pts) How many micro-feet (uft) are there in 24 kilo-feet?

24 KF+ 103/M = 2,4 X/0 uft

5. (5 Pts) The following measurements were taken for the perimeter of a rectangle. Calculate the perimeter of the rectangle and express the answer with the proper number significant figures. Measurements: 146.32 cm, 147.11 cm, 34.2 cm, 33.976 cm.

146.32 cm 147.11 " 34.2 " + 33.976 " 361.606 = (361.6 cm)