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

 $G=10^9,\,M=10^6,\,k=10^3,\,c=10^{-2},\,m=10^{-3},\,\mu=10^{-6},\,n=10^{-9}\,,\,2.54\,\,cm=1\,\,in,\\12\,\,in=1\,\,ft,\,5280\,\,ft=1\,\,mile,\,3\,\,feet=1\,\,yd,\,60\,\,sec=1\,\,min,\,1\,\,hr=60\,\,min,\,4\,\,quarts=1\,\,gal,\,2\,\,pints=1\,\,quart$

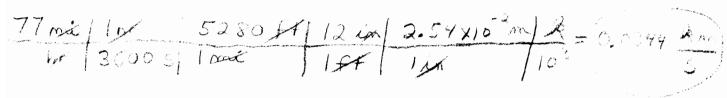
- 1. (6 Pts) Perform each of the following conversions. You must show the complete setup.
- a. Convert 808 cm to nm (centimeters to nanometers)



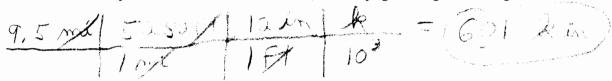
b. Convert 805 Mg to Gg (megagrams to gigagrams).



- 2. (6 Pts) Assume each of following numbers are measurements. Perform the indicated operations and then report the answer with the <u>proper number of significant figures</u>.
 - a. 112.145 cm + 15.1265 cm + 35.3 cm = 162.6 cm
 - b. $100.35 \text{ cm x } 5.10 \text{ cm x } 10.145 \text{ cm} = 5190 \text{ cm}^3$
 - c. (2.7 + 19.4)/12.14 = 1.82 g/mL 22.1 = 12.14 (3 s₁₅. f₁₈.
- 3. (4 Pts) A car is traveling at a speed of 77 miles per hr. Determine its speed in kilometers per second. (You may ignore significant figures, but must show complete setup.



4. (4 Pts) How many kilo-inches are in 9.5 miles (You may ignore significant figures)?



5. (5 Pts) A sample of silver ore was found to contain 0.016 % silver by mass. How many mg of silver can be recovered 500.0 kg of ore? You must show the complete setup.

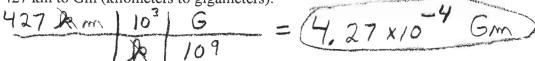
CHM 151	Quiz 1b	25 Pts	Spring 2014	Name:	Ke	4
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Show All Work To Receive Credit! Conversion factors and prefixes:

 $G = 10^9$, $M = 10^6$, $k = 10^3$, $c = 10^{-2}$, $m = 10^{-3}$, $\mu = 10^{-6}$, $n = 10^{-9}$, 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, 4 quarts = 1 gal, 2 pints = 1 quart

1. (6 Pts) Perform each of the following conversions. You must show the complete setup.

a. Convert 427 km to Gm (kilometers to gigameters).



b. Convert 85 ng to μg (nanograms to micrograms).



2. (6 Pts) Assume each of following numbers are measurements. Perform the indicated operations and then report the answer with the proper number of significant figures.

a.
$$313.4 \text{ cm} + 12.526 \text{ cm} + 20.052 \text{ cm} = 345.978$$

b. 6.20 cm x 16.12 cm x 12.145 cm =
$$\frac{1213,81988}{1210}$$
 cm³

c.
$$(2.7 + 19.4)/12.14 = \frac{182}{22.1 + 12.14}$$
 g/mL

3. (4 Pts) A car is traveling at a speed of 57 miles per hr. Determine its speed in kilometers per minute. (You may ignore significant figures, but must show complete setup.)

4. (4 Pts) How many inches are in 1.8 kilo-miles (You may ignore significant figures)?

5. (5 Pts) A sample of silver ore was found to contain 0.026 % silver by mass. How many mg of silver can be recovered 800.0 kg of ore? You must show the complete setup.

