Conversion factors: $k = 10^3$ c = 10^{-2} m = 10^{-3} $\mu = 10^{-6}$ n = 10^{-9} hr = 60 min. 1 min = 60 sec. 1 mile = 5280 ft 1 ft = 12 inches 2.54 cm = 1 inch

****SHOW ALL WORK TO RECEIVE CREDIT****

1. (5 Pts) A car is traveling at speed of 48 mile/hour. Determine its speed in kilometers/second.

48 mil 5280 FM 12 m 2-54 g/m 10 1 kg hr = 0.02146 km br 1 mil 1 Ft 1 in & 103/3600 sec 500

2. (5 Pts) Determine how many micro (µ) inches there are in 927 milli inches.

 $\frac{927 \text{ pm in}}{\text{pm}} \frac{10^{-3}}{10^{-6}} = \frac{927000 \text{ m in}}{\text{n}}$

3. (6 Pts) Assume each number is a measurement. Calculate each answer and express the answer with the proper significant figures.

a. 62.54 - 25.444 = 37.10b. $\frac{(2.72 + 9.44)}{4.777} = 2.546$ $\frac{1}{4.777} = 2.546$ $\frac{12.16}{4.777} = 4.519.6195$ $\frac{12.16}{4.777} = 4.519.6195$ $\frac{12.16}{4.777} = 2.5455$

4. (5 Pts) A car has 3.0 liter engine. Determine its displacement volume in cubic inches?

3.0 × 1000 mt / Cmx / 1 m =

5. (4 Pts) An ore sample was found to contain 0.45 % Au by mass. How many grams of Au can be recovered from 250 kg of ore?

250×103 g ore 0.45 Au = (1125

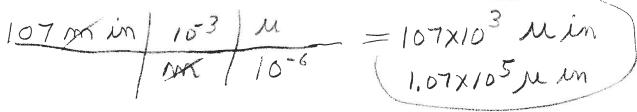
Conversion factors: $k = 10^3 \ c = 10^{-2} \ m = 10^{-3} \ \mu = 10^{-6} \ n = 10^{-9} \ hr = 60 \ min. \ 1 \ min = 60 \ sec.$ 1 mile = 5280 ft 1 ft = 12 inches 2.54 cm = 1 inch

****SHOW ALL WORK TO RECEIVE CREDIT****

1. (5 Pts) A car is traveling at speed of 63 miles/hour. Determine its speed in kilometers/second.

63 ma | 5280 st | 12 km | 2.54 em | 10 k hr = 0.028 km | 10 sec | 103 3600 soc | 5ec

2. (5 Pts) Determine how many micro (μ) inches there are in 107 milli inches.



3. (6 Pts)

a.
$$62.54 + 25.444 = 87.98$$
b. $\frac{(2.72 + 9.44)}{4.777} = 2.546$

$$\frac{12.16}{4.777} = 45.9 R_{15}$$

4. (5 Pts) A car has 4.0 liter engine. Determine its displacement volume in cubic inches?

4.0 K 1000 cm³ 1 m = 244 m³

5. (4 Pts) An ore sample was found to contain 0.65 % Au by mass. How many grams of Au can be recovered from 350 kg of ore?

350×10 gg/ 0.65 Au = 22759 Au