Reminders 07-07-09:

· **Buy Textbook and Read Chapters 1-3**
· **Read Syllabus;Sign Last Page of Syllabus no**
  Later than Thursday.
· **Form Study Groups**
· <u>**Log into Webassign**</u>
· **Purchase "AMPAD" paper**
· **Need Scientific Calculator for Exams**
· <u>**Significant Figures Handout**</u>
· **Check Website Occasionally**
· **Turn in Index Cards ASAP**
· **1st Webassign due Thursday 11:59PM**
· **Answers to Standardized Test p.29 C,C,B,A,A;**
  6a is F/m;6b is 0.001; 6c is F/(.001m)=2.7/
(0.001*350).
· **Note- some of the textbook problems have**
answers;please use them for practice.

Objectives:
· **Unit Conversions**
· **Uncertainty and Significant Figures**
· **Physical Modeling**
· **Problem Solving**
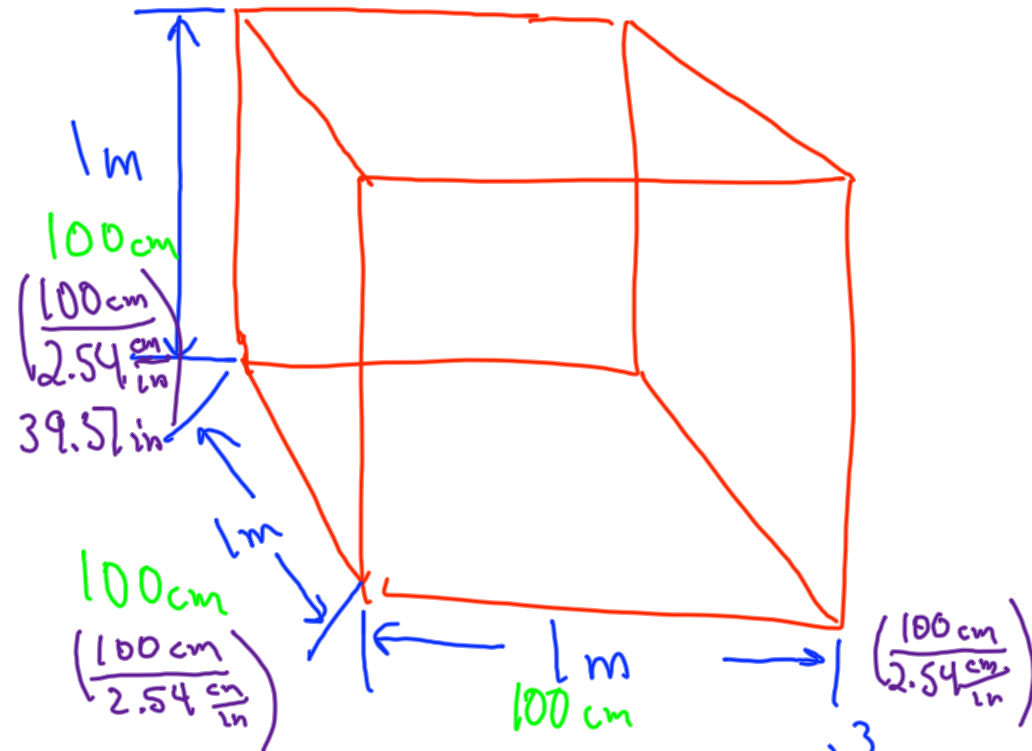
GO TO WWW.HOTMATH.COM FOR
REVIEW PROBLEMS FOR MATH

$$(6400)^4 = (6.4)^x (10)^y$$

$$(6.4 \times 10^3)^4 = (6.4)^4 \times (10^3)^4$$

$$10^{12} + 10^3 =$$

$$1,000,000,001,000$$

$$\frac{(10^2)(10^4)}{10^6} = 10^z$$

$$V = (1m)(1m)(1m) = ((1m))^3 = 1^3 m^3$$

$$= 1 m^3$$

$$V = (100 cm)(100 cm)(100 cm)$$

$$= (100 cm)^3 = (100)^3 cm^3$$

$$= (10^2)^3 cm^3 = 10^6 cm^3$$

$$1 m^3 = 10^6 cm^3$$

$$V = (39.37 in)^3 = (39.37)^3 in^3$$

$$= 61,023 in^3 = 1 m^3$$

- # How many feet in 66 inches?

$$\left(66 \text{ in} \right) \left(\frac{1 ft}{12 \text{ in}} \right) = 5.5 \, ft$$

How many inches in 15 yards?

$$(15 \text{ yds})\left(3 \frac{ft}{yd}\right)\left(\frac{12 in}{ft}\right) = 540 in$$

- **How many liters in 125 m³?**

$$\left(125\ \cancel{m^3}\right)\left(\frac{10^6\ cm^3}{\cancel{m^3}}\right)\left(\frac{1\ L}{10^3\ cm^3}\right) = 125{,}000\ L$$

- **How many in³ in 4.80 liters?**

$$\left(4.80 \, \cancel{L}\right)\left(\frac{1000 \, cm^3}{1 \, L}\right)\left(\frac{1 \, in}{2.54 \, cm}\right)^3 = 292.9 \, in^3$$

- **How many mL in 85 gallons?**

$$\left(85\ gal\right)\left(\frac{3.785\ L}{gal}\right)\left(\frac{1000\ mL}{L}\right) = 321.725\ mL$$

Sci. Notation

_ . _ _ _ _ $\times 10^{Exponent}$

25.3×10^3

2.53×10^4

2.53E4

2.53e4

1.38 ← guess

3 significant figures
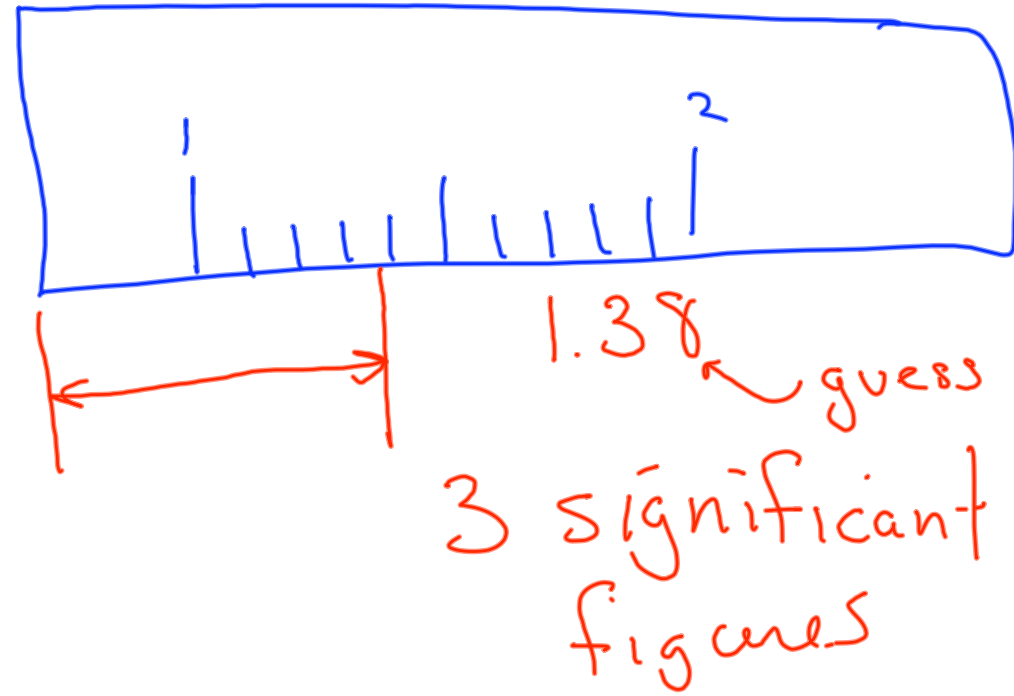
1000 1.0×10^3

1.00×10^3

1.000×10^3

$.0010$ 1.0×10^{-3}

$.001$ 1×10^{-3}

$100.0.$ $10\overline{0}0$

1.15

2.375

$$
\begin{array}{r}
2.375 \\
\times\ 1.15 \\
\hline
2.73 \\
\end{array}
$$

$$
\begin{array}{r}
2.375 \\
-\ 1.15 \\
\hline
1.225 \\
\end{array}
$$

1.22

$$
\begin{array}{r}
2.385 \\
-\ 1.15 \\
\hline
1.23\ \cancel{8} \\
1.24 \\
\end{array}
$$

$$
\begin{array}{r}
10.0 \\
-\ 9.9 \\
\hline
0.1 \\
\end{array}
\qquad
\begin{array}{r}
999.9 \\
+\ 0.1 \\
\hline
1000.0 \\
\end{array}
$$

$$
\begin{array}{r}
107.301 \\
3.7 \\
+\ 31.28 \\
\hline
\end{array}
$$

round to
tenth place

$$\frac{3.14159 - 3.14}{3.14159} = \frac{0}{3.14159}$$

$$\begin{array}{r} 3.14159 \\ -\ 3.14 \\ \hline 0 \end{array}$$

$$1.00000 - \frac{3.14}{3.14159}$$

$$1.00000 - .999$$

$$.001$$

Rules for sig figs don't always work.