

Feb 8, 2012

go over answers pg 349 #3,4

info on Converting units/ practice converting units

Reminder Quiz Friday!!

Warm- Up

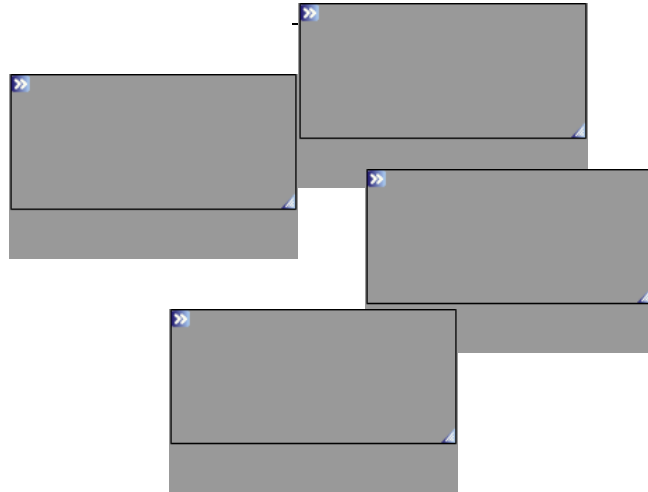
Put each of the following numbers in scientific notation

1) 23 400

2) 15 000 000

3) 0.000456

4) 0.0294



Answers pg 349 #3,4

3. (a) $\sqrt{\sqrt{?}}$ 7.65 mm has three significant digits.

(b) $\sqrt{\sqrt{?}}$ 20.2 m/s has three significant digits.

(c) $\sqrt{\sqrt{?}}$ 50.0 cm has three significant digits.

(d) $\sqrt{?}$ 0.084 km has two significant digits.

4. a) 32.674 km
32.7 km

b) 0.003922 g
0.00392 g
or
 3.92×10^{-3} g

a) 107.51 s
108 s

Converting Units:

Sometimes the data provided is not given in the units required to solve the problem in these cases you need to multiple by conversion factors which are memorized or referenced.

$$\begin{aligned} \text{i.e. } 1 \text{ min} &= 60 \text{ sec} \\ 1 \text{ hr} &= 60 \text{ min} \end{aligned}$$

$$\begin{aligned} 1 \text{ km} &= 1000\text{m} \\ 1\text{m/s} &= 3.6\text{km/h} \end{aligned}$$

number you are converting x $\frac{\text{units you want}}{\text{units you have}}$

i.e. convert 38 min to hours

$$38 \text{ min} \times \frac{\text{units you want (h)}}{\text{units you have (min)}}$$

$$38 \text{ min} \times \frac{1\text{hr}}{60\text{min}} = \frac{38\text{min h}}{60\text{min}} = 0.63 \text{ h}$$

Sample Problem 1: An athlete completed a 5km race in 19.5 min. **Convert this distance into m.**

Use Conversion Factor

$$5\text{km} \times \frac{1000 \text{ m}}{1 \text{ km}} = 5000 \text{ m}$$

Sample Problem 2: A train is travelling at 95km/h. **Convert 95km/h into meters per second.**

Use Conversion Factor

$$95\text{km/h} \times \frac{1\text{m/s}}{3.6\text{km/h}} = 26\text{m/s}$$

Complete the following questions
pg 349 #6,9

Attachments

S10 sig figs answers.notebook