

Please pick up one each:

Student info sheet

Polyatomic Ion sheet

McAfoos Resources

Periodic Table

Textbook

Sep 8-9:18 AM

Lab calculations - Uncertainty

Recording measurements

$$26.213 \pm .003 \text{ g}$$

digital  $\rightarrow \pm 5$  in last  
decimal place

analog  $\rightarrow \pm \frac{1}{2}$  of smallest  
division

Sep 8-8:30 AM

## Lab calculations - Uncertainty

addition and subtraction  $\longrightarrow$  add uncertainty

$$\begin{array}{r} 2.46 \pm .02 \\ - 1.22 \pm .03 \\ \hline 1.24 \pm .05 \end{array}$$

$$\begin{array}{r} 2.67 \pm .06 \\ + 1.11 \pm .06 \\ \hline 3.78 \pm .12 \end{array}$$

match Uncert.  $\nearrow$   $3.8 \pm .1$

$\nwarrow$  must be 1 digit

Sep 8-8:31 AM

## Lab calculations - Uncertainty

multiplication and division

$$[A \pm x] \div [B \pm y] = \frac{A}{B} \pm \frac{A}{B} \left( \frac{x}{A} + \frac{y}{B} \right)$$

$$(7.07 \pm .02) \times (8.15 \pm .03)$$

$$57.6205 \pm 57.6205 \left( \frac{.02}{7.07} + \frac{.03}{8.15} \right)$$

$$(57.6205) (.0065098359)$$

$$57.6205 \pm .3751$$

$$57.6 \pm .4$$

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## Significant Figures - counting

 $2.03 \leftarrow 3$  $4.000 \leftarrow 4$  (zero on right  
count if .)

zero on  
left  
X

 $2 \rightarrow 0.041$  $3 \rightarrow 000369$  $5 \rightarrow 40726$  $100.$ 

Sep 8-8:29 AM