

PHYSICS DEPARTMENT

PHY 111

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section #: 28

12/15

Q1: write the number of significant figures for each of the following numbers:

25001 = 5

$3.2500 \times 10^6 = 5$

23.54 = 4

3.63 = 3

0.05620 = 4

1.00065 = 6

235.09 = 5

96.9 = 3

Q2: A student obtained the following measurements for the length of the rod, 8.53, 8.26, 8.66, 8.54, 8.68, 8.50, 8.34, 8.46 and 8.56cm. The true value is 8.72cm.

What is the best estimate for the length of the rod? the best $\rightarrow \bar{x} = 8.50$ cm

Is the result accepted or not? not accepted
how!

Q3: Rewrite the following measurements in the right forms:

4.685 ± 0.2568 m \rightarrow ~~4.685 ± 0.256~~ ~~4.685 ± 0.2~~ 4.685 ± 0.030

98.567 ± 3.598 g ~~98.567 ± 3.600~~

Q4: CALCULATE these values if $a = 568.365 \pm 0.261$, $b = 14.3689 \pm 0.168$, $d = 89.56 \pm 63.58$

$e = 582 \times 10^2 \pm 46.87 \times 10^2$

$a+b =$ ~~$568.365 + 14.3689 = 582.734$~~ 582.734 error!!

$d \cdot e =$ $89.56 \times 582 \times 10^2 = 5212 \times 10^3$ error!!