**WHEN TO ROUND OFF.**

Only the FINAL ANSWER should be rounded off- Always perform the entire operation
and then round off at the end.

If the deciding digit is LESS THAN FIVE, round down.

Example 4.124 rounded off to 3 sig figs = 4.12

If the deciding digit is FIVE OR MORE, round up.

Example 0.0351 rounded off to 1 sig fig = 0.04 - ....--

PART H: UNCBRTAINITY IN MEASUREMENT

All measurements have some amount of UNCERTAINTY associated with them. Only when we COUNT a set of objects do we get an EXACT number (eg. 4 cows, 16 Coke® cans, 25 physics textbooks, etc).

*Example*

127.3

120 - 130

The measured value (shown by the arrow) has 3 certain figures (1, 2 and 7) and 1 uncertain figure (3, or is it a 2, or is it a 4?).

We define the UNCERTAINITY of a number to be the APPROXIMATE AMOUNT BY WHICH THE LAST SIGNIFICANT DIGIT MIGHT BE IN ERROR.

*Example*

10 11

The pointer seems to be centered on a value of 10.73, but since the pointer is so wide, the value might be as high as 10.75 or as low as 10.71. Therefore, we say the value is 10.73 ± 0.02