Physics notes

**Significance of measurements**

* Equipment has the ability to measure to a certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. That precision will have an effect on how “good” your answer can be.
* A floor to be tiled measures 3.1m by 1.7257m. The area of this space when calculated would be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The answer above has too many decimal spaces because of the number 3.1m.
* The answer can only be as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_as the lowest number of sig figs.

**Pacific – Atlantic Rule for Significant Figures**

* If decimal point is physically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , start on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (left) side of number. Move across to the right and begin counting with the first non-zero number and count the rest.
  + 0.001205 \_\_\_\_\_\_\_\_\_\_\_\_ sig figs
  + 0.0012050 \_\_\_\_\_\_\_\_\_\_\_\_ sig figs
* If decimal point is physically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , start\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (right) side and move across to the left and begin counting with first non-zero number and count all remaining.
  + 120500 \_\_\_\_\_\_\_\_\_\_ sig figs
  + 1725000 \_\_\_\_\_\_\_\_\_\_\_ sig figs
* **Scientific Notation**
  + Often, expressing large or small numbers can be simplified by use of scientific notation. This involves breaking numbers into two factors. The first factor will represent all the significant figures in the number and the second factor will be 10n, where n is any digit. n positive for numbers greater than 1 and negative for numbers less than 1
  + The decimal will always go \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the first \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_number.
    - 6,525,000
      * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - 327,500
      * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - .0003275
      * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_