

PHYSICS WEBSITE 2

Topic : Significant Figures (Part I)

Link | <https://barisciencelab.tech/Physics2.html>

2.2 Do Now: Measurement

Tutorial: <https://youtu.be/apvnImg9kno>

Significant figures are reliable digits of a measurement. For example, if a length measurement gives 114.8 mm while the smallest interval between marks on the ruler used in the measurement is 1 mm, then the first three digits (1, 1, and 4, and these show 114 mm) are only reliable so can be significant figures. So what's wrong with the last digit (i.e.0.8 mm) but it is also considered as a significant figure with a big but: It is uncertain.



The least count of our Lab meter sticks is 0.1 cm and therefore a reading can be made to 0.01cm. Picture above shows Mr. Bari using a meter stick to measure the length of a plastic strip. The meter stick is calibrated in centimeters, so we know that the strip is between 41 and 42 cm. The least count of this meter stick is one millimeter, so we know with absolute certainty that the object is between 41.6 cm and 41.7 cm. We then estimate the object's length to the fractional part (doubtful figure) of the least count subdivision. We may estimate that the strip is closer to 41.6 cm than it is to 41.7 cm and report the length to be 41.64 cm or 0.4164 m.