

A. Qualitative vs. Quantitative Observations

1. Qualitative: Observations that describe the nature of something
example -- colour, shape, odour
2. Quantitative: Observations that involve measurements
example -- length, mass, density, volume

B. International System of Units (SI)

1. Length -- meter (m)
2. Mass -- kilogram (kg)
3. Time -- second (s)
4. Temperature -- Kelvin (K)
5. Amount of Substance -- mole (mol)
6. Electric Current -- ampere (A)
7. Light Intensity -- candela (cd)

C. Prefixes

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|------------|-------------|-------------|-------------|
| 1. mega- M | 2. kilo- k | 3. hecto- h | 4. deca- da |
| 5. deci- d | 6. centi- c | 7. milli- m | 8. micro- m |

D. Use of SI System of Measurement

1. 75 cm (not 75cm) -- leave a space between the last digit and the unit.
2. 1.36 m (not 1.36 m.) -- don't put a period after the unit unless it is at the end of the sentence
3. 6 m (not 6 meters); six meters (not six m) -- use numbers and symbols together only!!
4. 0.25 cm (not 1/4 cm) -- use decimal fractions instead of fractions
5. 0.67 mm (not .67 mm) -- put a zero in front of a decimal if the number is less than 1

E. Accuracy, Precision, and Errors

1. Accuracy: how close is the measurement to its real value
2. Error: the difference between the observed value and the real value
2. Precision: how close are two observed measurements from each other that are made in the same way