Percent (%) Error (a.k.a: Percent Deviation)

Compares your measurement with an accepted one. *ESRT

No measurement is perfect

Errors in value happen from carelessness or improper use of instrument.

Science has some accepted values
(e.g.: density H_20 = 1 g / cm^3 @ 4ºC)

$$\text{Percent Error} = \frac{\text{Difference between values}}{\text{Accepted Value}} \times 100\%$$

e.g.: student measured mass of object = 127.5 g,
accepted value = 125.0 g, what is % error?

$$\% \text{ Error} = \frac{127.5\text{ g} - 125.0\text{ g}}{125.0\text{ g}} \times 100\% = \frac{2.5\text{ g}}{125.0\text{ g}} \times 100\% = 2.0\ \%$$

e.g.: measured volume = 1000 ml, actual volume = 2000 ml,
% error = ?

e.g.: % error = 10 %, accepted value = 10 cm, measured value = ?