

Introduction to error analysis data sheet
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NAME _____ Section _____ Date _____

Part one- Readability and uncertainty of a measuring instrument

Instrument	readability	uncertainty
ruler		
vernier caliper		
Dial-o-gram balance		
Triple beam balance		
Electronic (digital) balance		

Part two-Measurement of lengths of calibration block (i.e., the block with holes).

Please note that dimensions (lengths) of the sides of the blocks are denoted as **long**, **medium** and **short**

All measurements must have units when applicable and all uncertainties should be written using one significant figure.

Part one- Length \pm Absolute uncertainty of length

Dimension (length) measured	Ruler	Caliper
long $\pm \delta$ long		
medium $\pm \delta$ medium		
short $\pm \delta$ short		

Part two- Length \pm Per cent (fractional) uncertainty of length.

Dimension (length) measured	Ruler	Caliper
long $\pm \delta_{\%}$ long		
medium $\pm \delta_{\%}$ medium		
short $\pm \delta_{\%}$ short		

Part 3- Measurement of mass (of a coin). Use any denomination. Lab partners should use different coins

Measure the mass of coin using triple beam balance (include uncertainty). _____ g

Measure mass of coin using dial-o-gram balance (include uncertainty). _____ g

Measure mass of coin using digital balance (include uncertainty). _____ g

Are the three mass the same? Explain (Uncertainty must be considered).