CAIE Physics A-Level

Paper 3: Presentation of Data and Observations

Flashcards

When should the table of results be drawn up?

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A table should be drawn up before readings are taken. This prevents results having to be copied up afterwards.

Where should the columns for calculated values go in a results table in relation to raw data columns?

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Calculated value columns should sit to the right of raw data columns.

What should be included in a column heading?

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Both the quantity being measured or calculated and its units. The quantity symbol can also be included.

How can anomalies be dealt with in a results table?

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They should be identified by highlighting or circling. They should also be ignored when calculating a mean.

What values in a results table should always be to the same degree of precision?

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Values in the same column should be to the same degree of precision.

Any columns of raw data columns should be to the same resolution as the measuring instrument.

If current = 5.0 A and voltage = 78.55 V, how many significant figures should the calculated resistance be to and why?

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Current = 5.0 A -> 2 sf

Voltage = 78.55 V -> 4 sf

The calculated resistance will be acceptable to 2sf as this is the limit of precision.

On a graph, how should the axes be labelled?

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1. Titles should be the same as the column headings with both the quantity its units.
2. Suitable scales should be used, with numbers regularly spaced at least 2 cm apart.

How large should you draw your graph in relation to the graph paper?

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A graph should fill up at least half of the graph paper.

How much of your graph should your data points occupy?

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Data points should spread across at least half of the graph axes.

What does it mean if a graph has a false origin?

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The axes cross at a coordinate that does not read (0,0).

How accurately should you plot your data points on a graph?

How accurately should you plot your data points on a graph?

With an accuracy 1mm or better.

How should a trend line be drawn?

How should a trend line be draw?

It should be drawn so there is an even spread of data points on each side of the line.

The line should be a continuous with no kinks, drawn using a sharp pencil and ruler (if a straight line).

How should an anomalous point be plotted on a graph?

How should an anomalous point be plotted on a graph?

The point should be identified clearly with a circle or a label.

A single anomalous point can be ignored when drawing your trend line.