

A level – Evaluations (OCR)

All OCR, AS & A2, Evaluations take the same form. (All of this information is given to you in the Practical Skills Handbook)

1. You will be asked to find the percentage uncertainty in a piece equipment used.

First state the limitations of the equipment – protractor to the nearest degree, ruler to the nearest mm, stopwatch to 1/10 sec. DO NOT go for half a gradation.

The percentage uncertainty is found from:

The limitation of the equipment x 100 / the reading from the equipment

2. You will be given a graph and expected to add a 'worst acceptable straight line'. You will be expected to find the gradient of their line of best fit and the 'worst acceptable straight line'.

The percentage uncertainty is found from:

**Difference in gradients x 100 / original gradient
(Either 'original' gradient will be OK)**

3. You will be asked to find the percentage difference between an experimental value and an 'accepted' value.

The percentage difference is found from:

Difference between the two values x 100 / the 'accepted' value

4. You will be asked to comment on the reliability of the experiment:

Comment on the scatter of the points on the graph (little scatter = better reliability), **the use of repeats and discuss and compare the percentage uncertainties and percentage differences calculated previously.**

5. The last questions will usually say:
 - **Identify** two limitations
 - **Explain** how these two limitations can be improved
(One limitation will almost always be parallax and require the presence of a fiducial point to improve the experiment, the other often relates to 'thickness' of equipment – whether electrical wires, string or other equipment)
 - **Discuss** the impact on an experimental value – This means state: 'if a goes up, b goes down' not 'it will have an impact'!

This requires **5** distinct bullet points and no waffle.

Please think before you write anything, lay everything out carefully and don't miss steps out.