



SALLYWEATHERLY

## 7 MISTAKES MOST STUDENTS MAKE IN THEIR IB PHYSICS EXAMS

### 1 Never underestimate the importance of Topic 1

- Section A in Paper 3 (43% of SL and 33% of HL) is all about Topic 1 and Experiments
- SL - up to 8.9% of final IB mark
- HL - up to 8% of final IB mark
- Usually one question in Paper 1 (about absolute, fractional or percentage uncertainties)

### 2 Don't confuse degrees and radians in Topic 6

- Radians are used in Topic 6 for angular velocity and acceleration.
  - Make sure your calculator is set correctly in either degrees or radians before you solve the problem.
  - OR use the conversion factor of  
$$\text{Radians} \rightarrow \text{degrees: } 360/2\pi$$
- The rest of the course uses degrees.

### 3 Don't give impossible numerical answers

- Conduct a reasonableness check:
  - Calculator error
  - Power of ten error
- Some obvious examples:
  - Refractive index (visible light):
  - Energy of a photon: (visible light):
  - Speed of any object with mass:

### 4 Don't confuse the rules of vertical and horizontal motion in a gravitational field (Topic 6)

- Draw a table separating out vertical and horizontal motion.
  - Use SUVAT equations for vertical
  - Use distance = speed x time for horizontal motion.

### 5 You MUST know your definitions

- Honestly.... about 9-11% of your final IB mark is down to learning precise and correct definitions.
- Particularly important in option topics

### 6 Understand the exam command words correctly

You can find a full list of these in the IB Physics specification

### 7 Don't get your line of best fit wrong

- Reasonable balance of points about the line
- Use clear plastic ruler
- Don't force the line through the origin
- Don't make it thick or 'hairy'
- Don't join the dots