12th April – Part 1

1. Draw in a **line of best fit** for the following data:

a.

b.

c.

d.
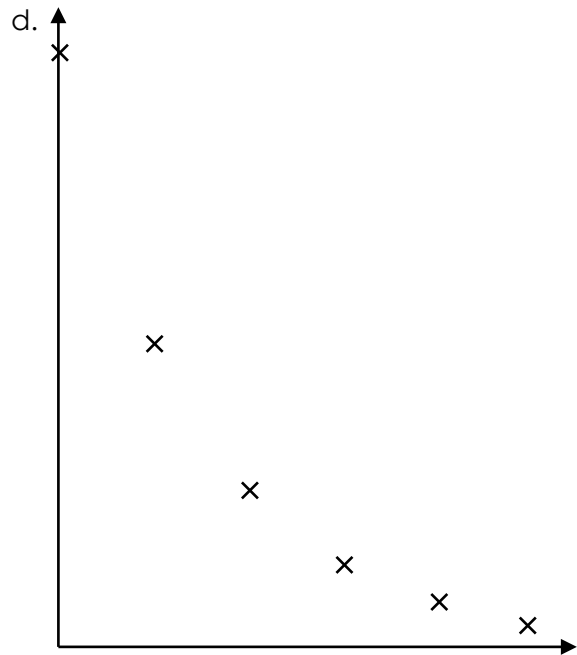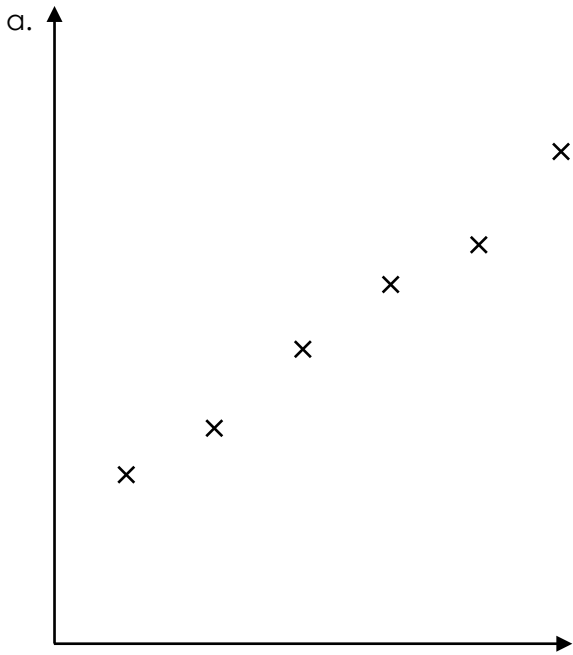
12th April – Part 2
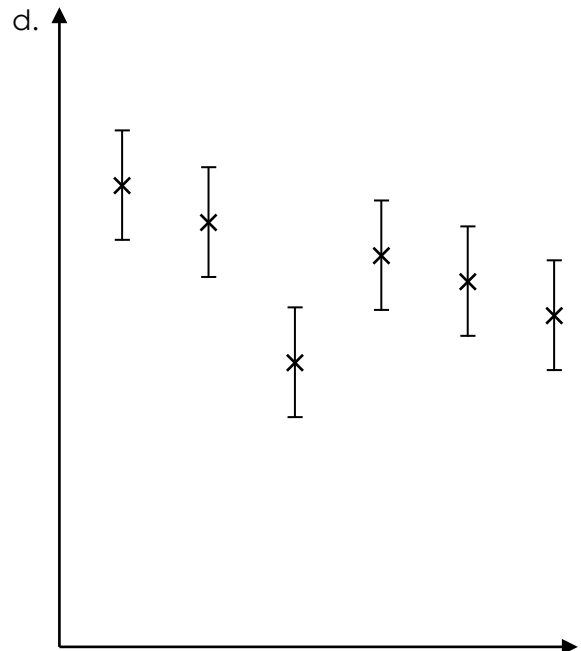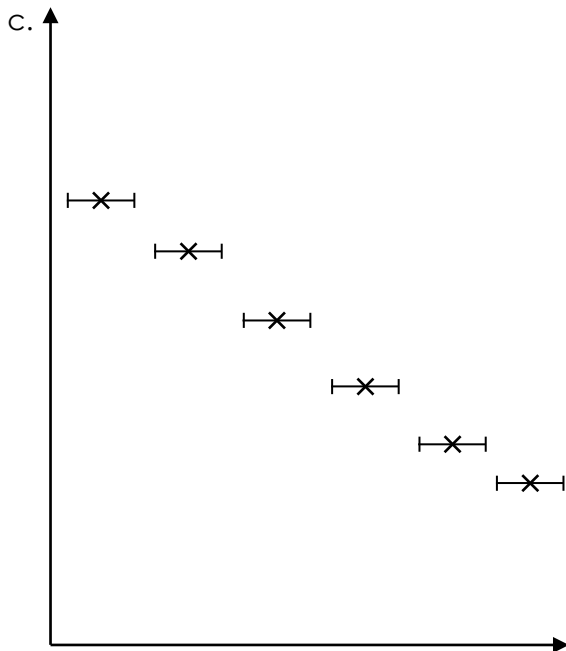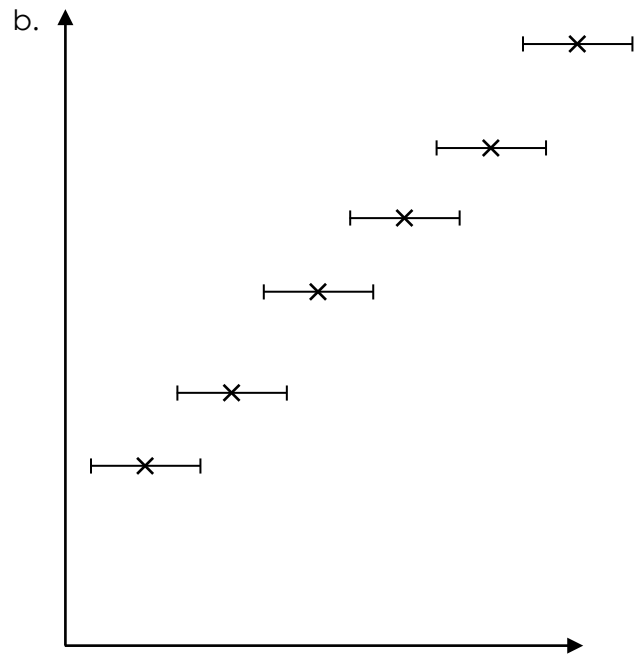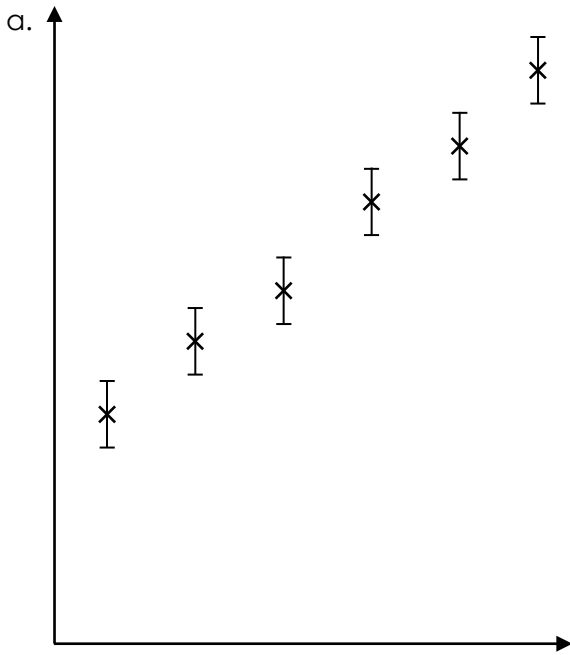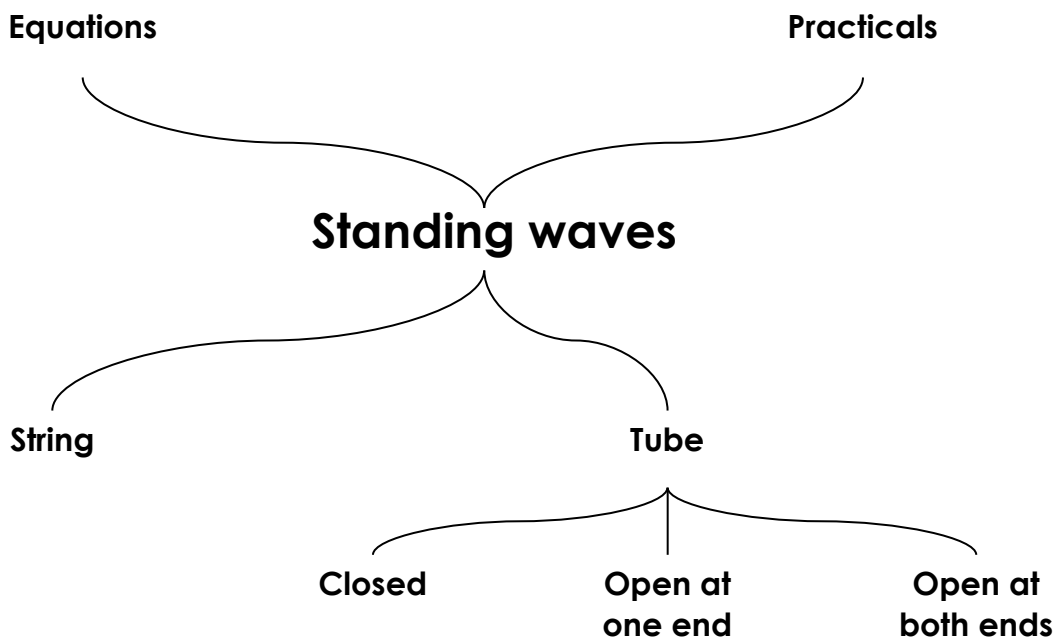
2. Draw in a '**line of best fit**' and a '**worst acceptable**' line that passes through the error bars for the following data:

a.

b.

c.

d.

Revision Activity

When you're revising you need to take an **active** part in the work – this will help you remember much more of this information for much longer. Try this short activity below:

1. a. Spend no longer than 3 minutes writing down everything you can **recall** about standing waves from **memory** – use the diagram below to help you get started

Equations   **Practicals**

Standing waves

String   **Tube**

Closed   **Open at**   **Open at**
                    one end   **both ends**

b. Next, have a quick look at your notes for any **extra information** and to check what you have written is correct

c. Now put your notes away and add a bit more information to your revision notes above

This kind of activity can be completed quickly for all the topics you're studying – this is for **you** to use while revising so you don't have to write in full sentences or make it super pretty. As you do this more often you will find that you can recall more information and make links between different areas of a topic.

14th April

1. A spherical steel ball bearing is held by an electromagnet vertically above a trap door switch. When a switch is pressed, the current to the electromagnet is switched off and the ball drops. Pressing the switch also turns starts a digital timer. When the ball bearing hits the trap door switch this opens a second circuit which stops the stop clock.

   The procedure is repeated for several heights and a mean time is calculated for each height.

Height / m	Mean time / s	Time^2 / s^2
0.30	0.29	0.084
0.60	0.37	0.14
0.90	0.45	
1.20	0.52	
1.50	0.57	
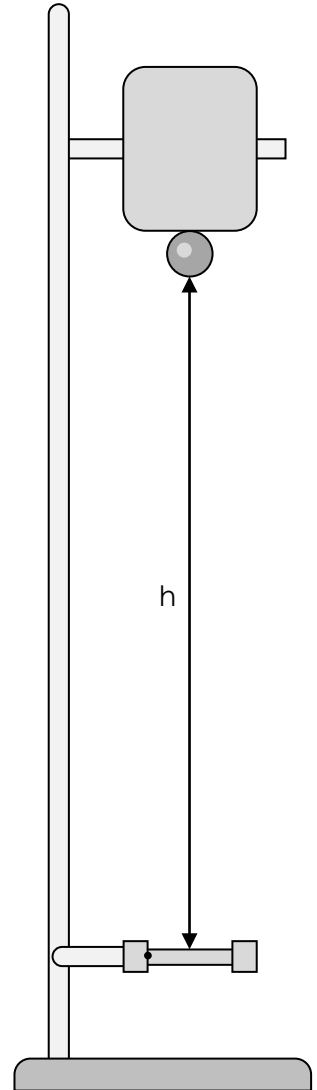
a. Complete the **table**

b. Plot a **graph** of time^2 against height

c. Calculate the **gradient**

d. Use the gradient value to determine a value for **g**, the acceleration of free fall

e. Suggest a **reason** the line on the graph does not pass through the origin

14ᵗʰ April