A renaissance of pen-and-paper … in a digital age.

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Renaissance

/rɪˈneɪs(ə)ns,-õs/

noun

the revival of European art and literature under the influence of classical models in the 14th–16th centuries.

- the culture and style of art and architecture developed during the Renaissance.
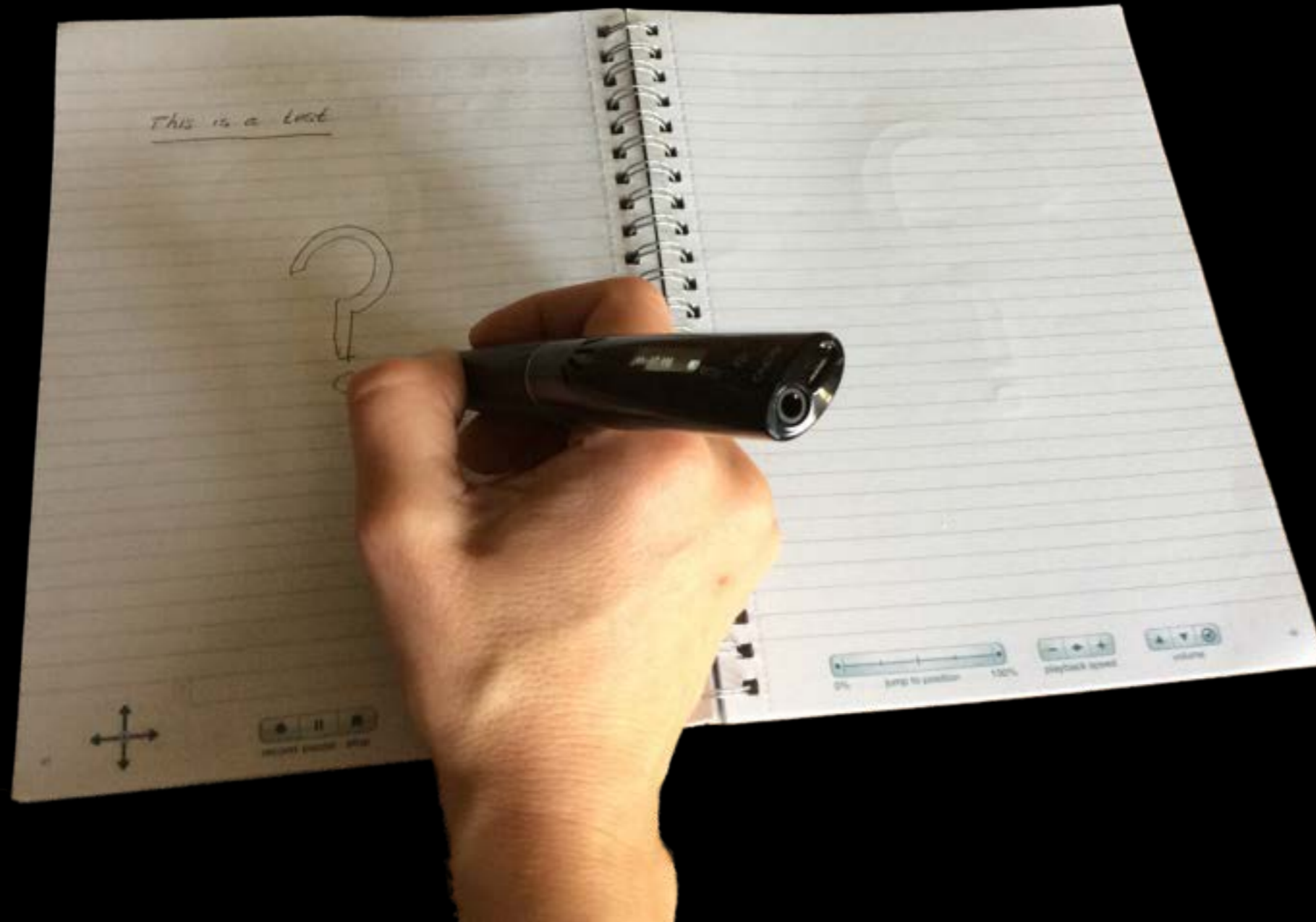 noun: **Renaissance**

- a revival of or renewed interest in something.
  noun: **renaissance**; plural noun: **renaissances**
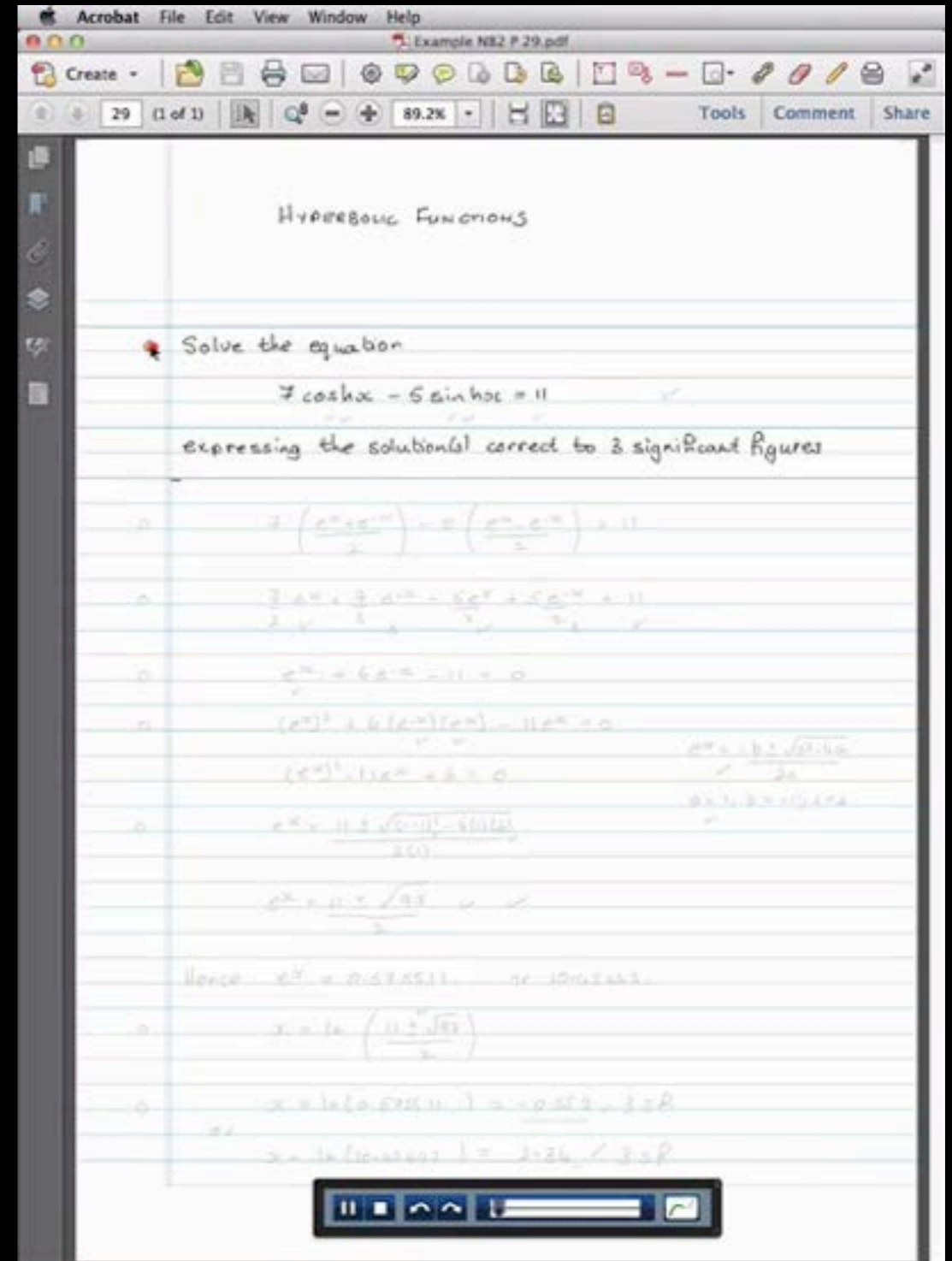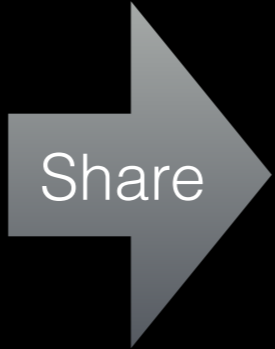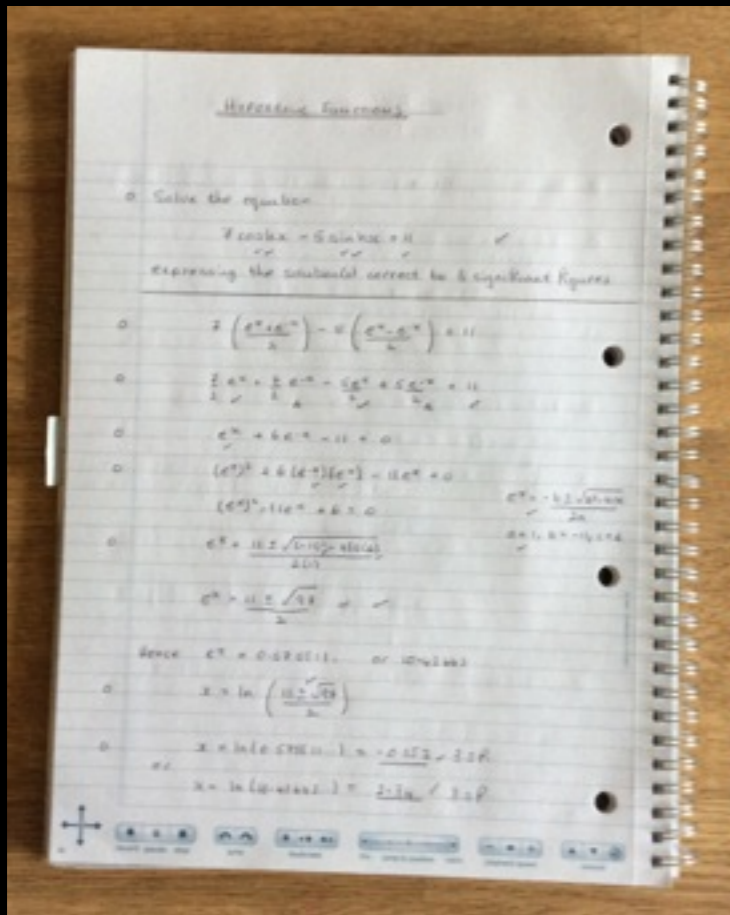 "cinema-going is enjoying something of a renaissance"

$$\underline{r} = \underline{a} + \lambda(\underline{b}-\underline{a})$$

$$\underline{r} = \binom{3}{1} + \lambda \binom{}{}$$

$$x = 3 - 2\lambda$$
$$y = -1 + \lambda$$
$$z = 2 + 2\lambda$$

$$\frac{x-3}{-2} = \frac{y+1}{1} = \frac{z-2}{2}$$

A digital age …

Livescribe™ paper-based computing platform

Record and Playback

Share

My view - Sharing

Students view - Shared

Print on paper and watermarking

Original PDF Content

Pencast PDF

+

= watermarked Pencast PDF

Pros and Cons

- Syncs audio to your handwritten notes.

- Accurate synchronisation.

- Excellent sound quality.

- Simple to use.

- Portable, both equipment and digital recordings.

- Facilitates a variety of learning modes.

- Excellent online support.

- Wide-range of apps.

Pros and Cons

- Must use paper printed with a special microdot pattern.

- Audio session can not be edited.

- Online or PDF Ink colours limited to 3.

- Audio lost when viewing pencast PDFs on IOS devices.

Pencasts for enhanced learning

- Created for first year undergraduate students studying mathematical methods.

- Access to 60+ pencasts.

- Average size of a pencast is 7 MB.

- Duration of 5 to 30 minutes.

Feedback from students

82% of students found they helped them *understand* where they could *improve*.

Feedback from students

79% of students found the pencasts *easy to understand*.

Feedback from students

"... brilliant, it's like you are back in the classroom, can fully understand what is going on and the working out is clear."

"... one thing reading a textbook ..., but actually seeing it carried out, with talking, really makes things easier to pick up and learn."

"... great resource. Easy to listen to and follow, and having the recording to pause, rewind and so on makes it so much easier."

Some pencasting tips

- Use a script
- Speak after writing
- Pre-draw elements
- Pre-draw templates
- Pause and pop!

- Use visual cues
- Add annotations
- Keep it short
- Practise
- Get feedback

Remember to turn you pen on!

Cost to get started!

Livescribe 2 GB echo smartpen (≈ £105)

Livescribe echo smartpen Edu Essential Bundle (≈ £140)

- Livescribe Echo 2GB Smartpen

- Livescribe Wifi/Echo 3D Recording Headset

- Livescribe A4 Single Subject Notebook

Livescribe echo smartpen Edu Bundle Extra (≈ £150)

- Same as above but with:

  Livescribe Wifi/Echo/Pulse Ink Refill 5-pack (4 Blue, 1 Red)

- Livescribe Sky WiFi 2GB, 4GB Edu (≈ £160), 8GB smartpen

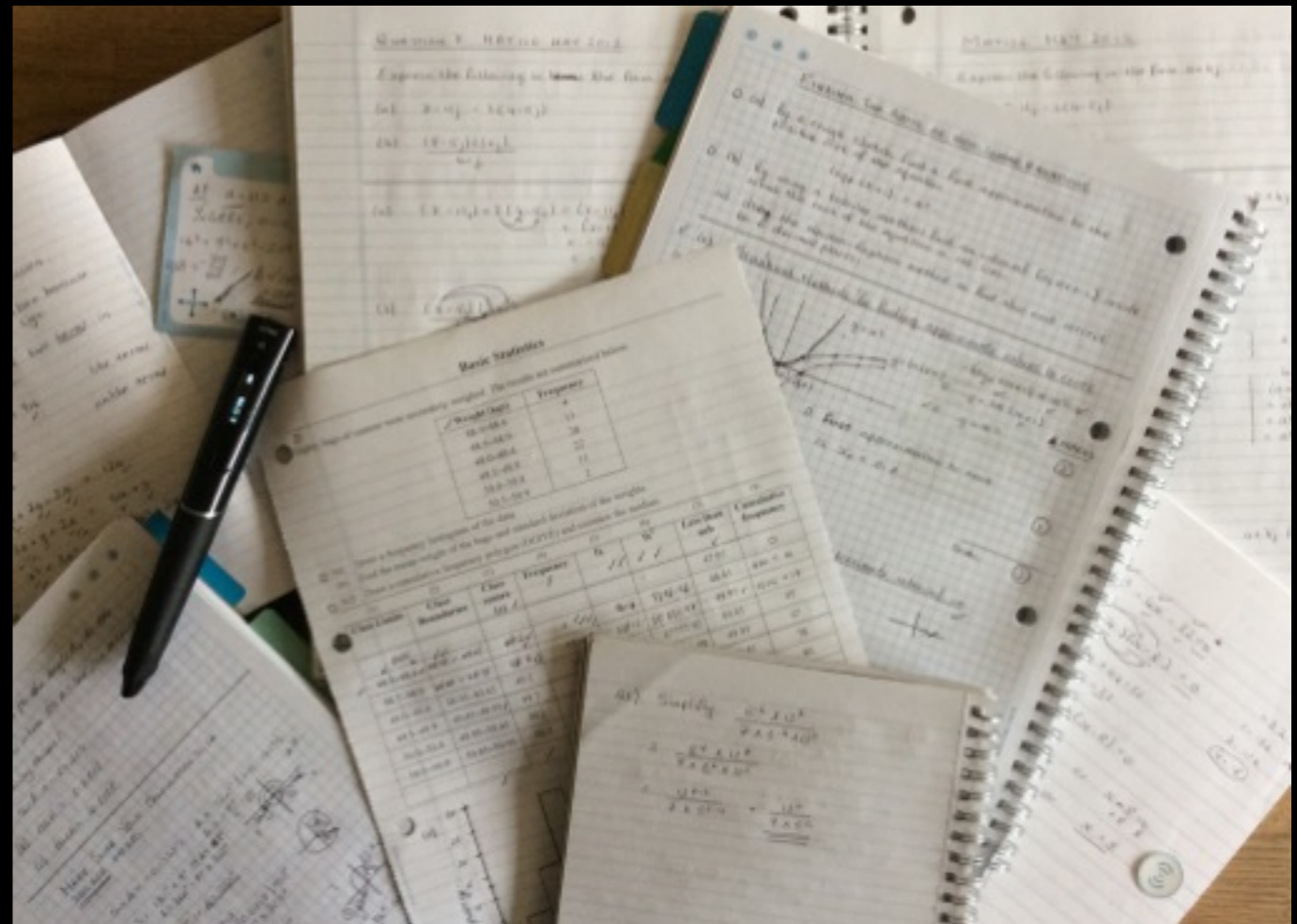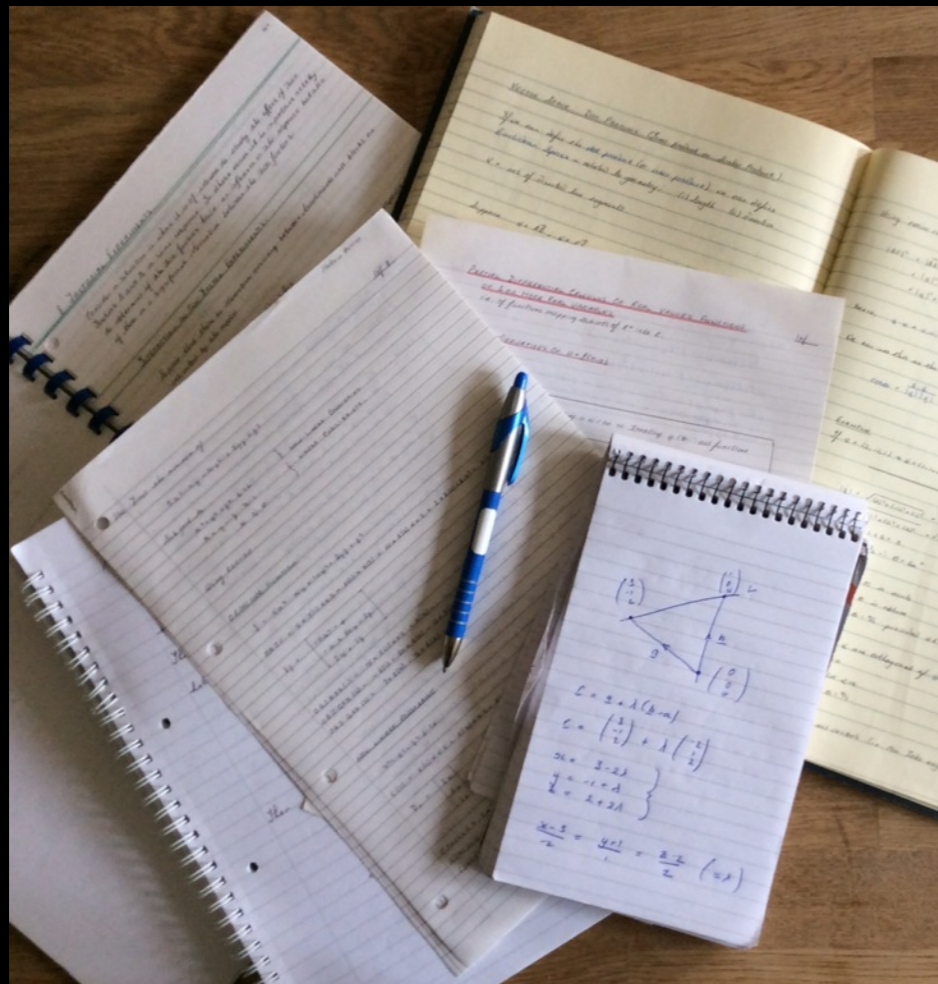- Livescribe 3 smartpen - £130 - Pro (≈ £170) (iOS7 iPhone/iPad)

What next?

- Workshop to train maths teachers.

- Student partnerships.

- Practice pencasting techniques.

- Keep using pen and paper!

Summary

From this ....

To this ....

Thank-you for listening!

Any Questions?