Using Numbas for final exams

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NUMBAS

Collaborative Award for Teaching Excellence 2020

χrun

Aim of this short video

Summarise activity using Numbas for exams, particularly since the onset of the Covid pandemic.

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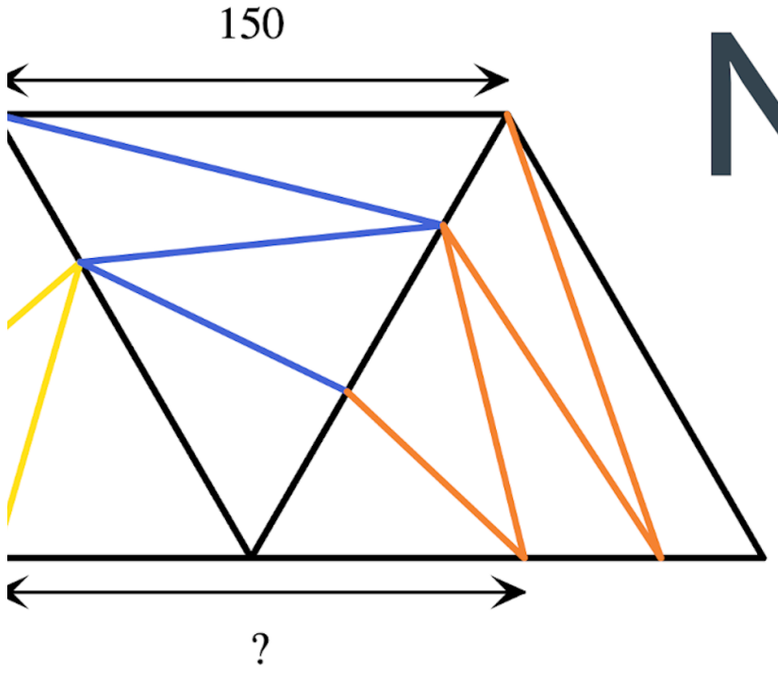
View these slides and find out more at tinyurl.com/TalksByChris



NUMBAS

$f(x$

$$\frac{\mathrm{d}f}{\mathrm{d}x} = \texttt{21x^6+48x^5+9} \quad 21x^6 + 48x^5 -$$

Show steps

2 Columns: 2

3

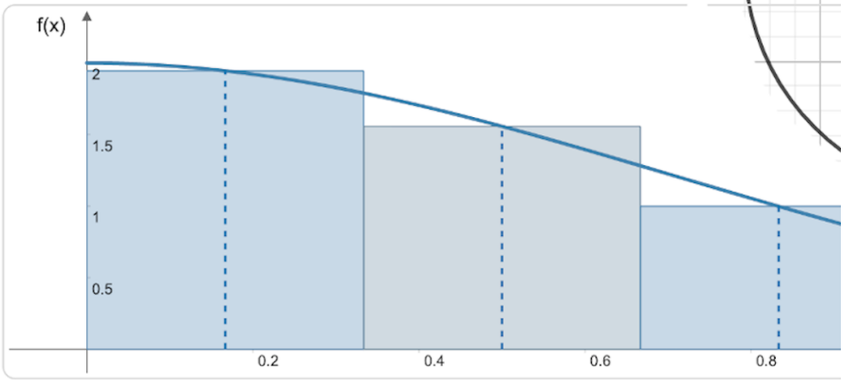
-1

```
1 seq[-1]
```

Write Python code

b)

The rectangle rule approximates an integral by dividing an area into rectangles. In the below , the x range into 3 rectangles of equal width, with the height of each given by the value of $f(x)$:



Compute the same integral as part a) using this method, with 3 rectangles.

What is Numbas?

Numbas is a mathematical e-assessment tool developed by the E-Learning Unit in the School of Maths, Stats & Physics.

Offers instant feedback and randomisation: ideal for formative assessment.

Trends and observations

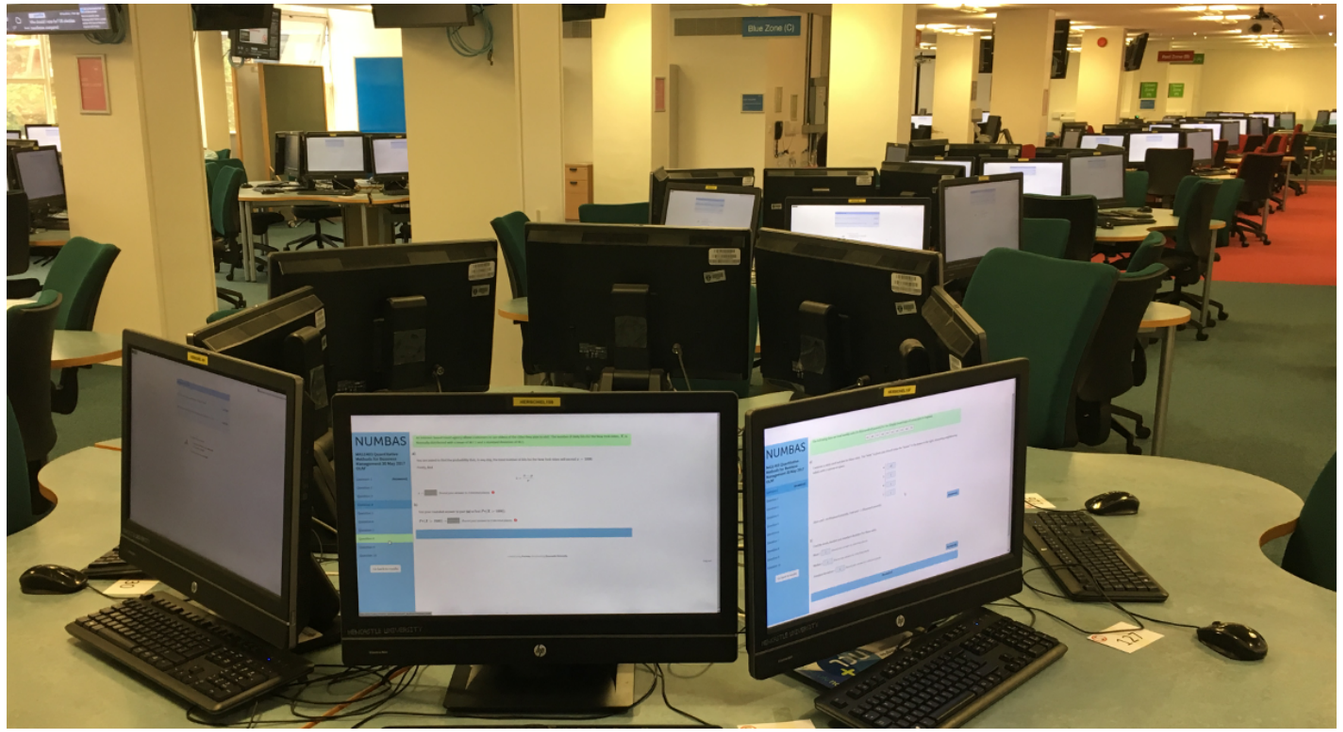
Significant increase in higher stakes assessments.

Increased use of hybrid assessments.

Rapid growth of Numbas use in Engineering.

A brief history of Numbas for exams

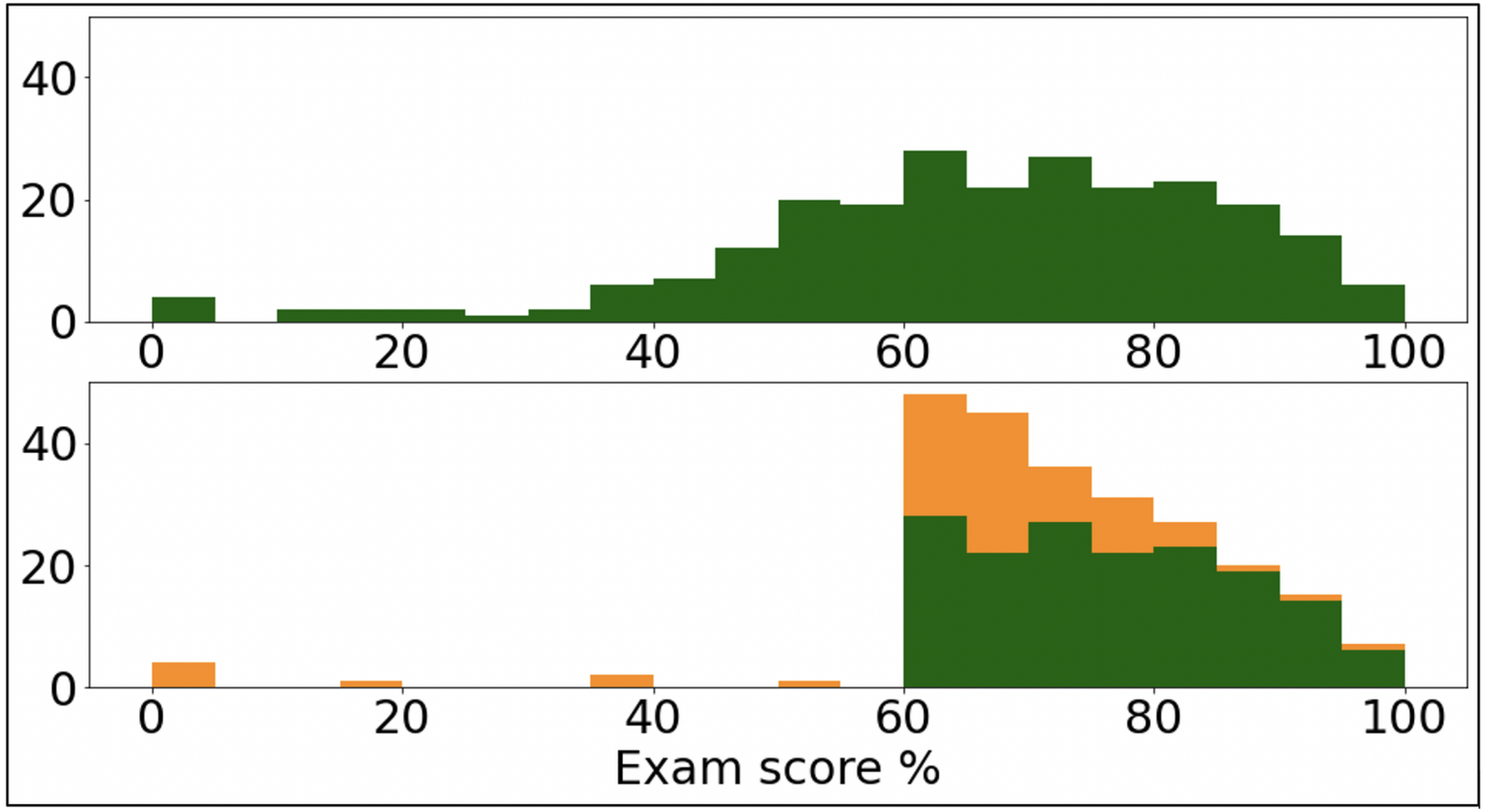
Pre-Covid: most assessments were low-stakes, with a small number of exams and class tests.



Pass-Fail assessments

Used for maths and physics stage 1 in 2019/20.

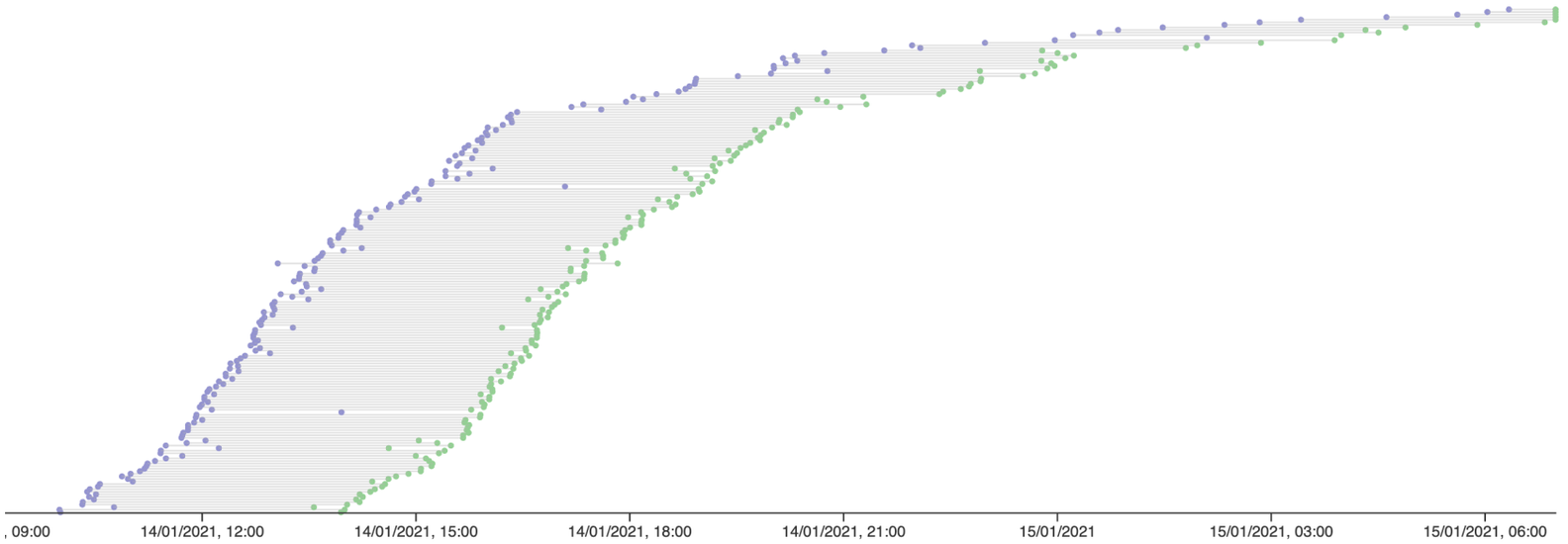
Served an important purpose at the start of the pandemic.



"4 in 24" assessments

Used for maths and physics stage 1 in 2020/21.

Students have a fixed time within a 24 hour window, with Numbas controlling the timer.



Hybrid assessments

Emerging from 2021/22 exams and in widespread use in 2022/23.

Students upload work to some questions to Canvas for manual marking.
Allows efficient, focussed marking

$b =$ _____ *Round your answer to 4 decimal places.*

$c =$ _____ *Round your answer to 4 decimal places.*

Submit part

6 marks

Unanswered

c)

Plot the data and best fit curves using both of the above methods.

Upload your plot to Canvas

Save and upload as a png file.

☐ I have written an answer to submit through Canvas

Numbas developments supporting exams

New features, developed in response to changing formats, including:

- Exam receipts
- Facility to set availability dates and attempt durations for individual users
- Attempt re-marking features

Numbas and Inspira

Several exams in 2021/22 will take place on campus and use Numbas via Inspira.

Numbas continues to be an option for invigilated exams.

Contact us to find out more.

Find out more

You can e-mail the Numbas team at numbas@ncl.ac.uk

Numbas website at numbas.org.uk

Numbas editor at numbas.mathcentre.ac.uk