Webinar 28 May 2020

How I encourage my students to do prep work with MyLab Economics and MyLab Mathematics"

by Professor Leslie Christensen

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School: Copenhagen Business School
Course: Microeconomics

Leslie Christensen has an extensive portfolio of implementing new technology-enhanced teaching methods since 2006.

Copenhagen Business School is one of the world's top universities for Business & Management.

- **CBS Denmark**
- **20.000 students**
- **Undergraduate Degrees**
- **Ranks #10 in the world & #6 in Europe.**

Why technology? Why MyLab Economics?

Because Economics is something students learn by doing

CBS COPENHAGEN BUSINESS SCHOOL HANDELSHØJSKOLEN

EFMD EQUIS ACCREDITED · AACSB ACCREDITED · ASSOCIATION OF MBAS ACCREDITED · CEMS · PIM

I have noticed that the profile of my students had changed, particularly over the last decade and I have identified two important changes affecting my work

Students finishing high school and entering university are better in group work and project tasks

But their level of Math knowledge appeared to be lower than in the previous years.

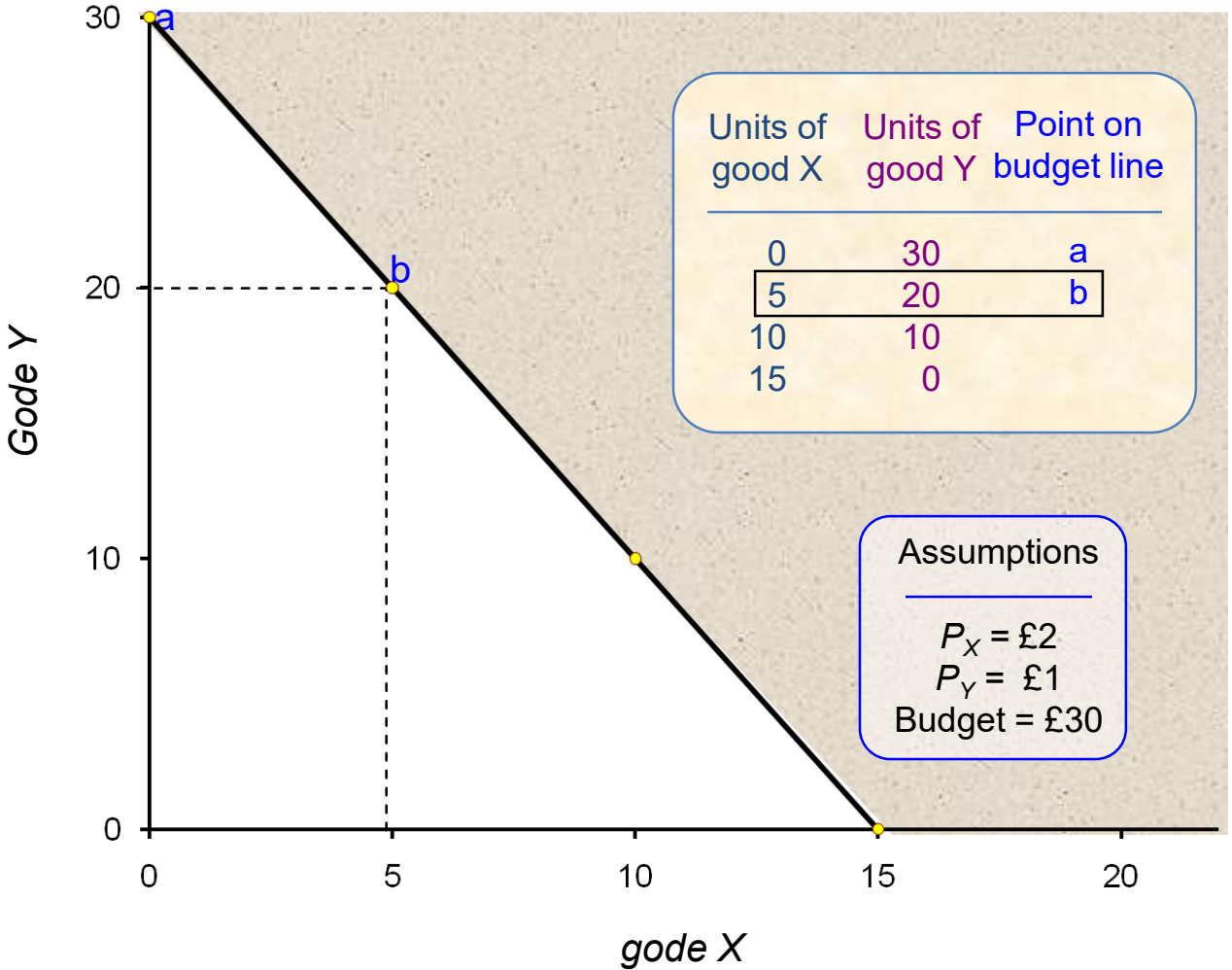
I found this also to be true for students who had a gap year (or several years) since graduating high school

Students were born in digital era and raised as digital natives, which appeared to be indicative of student attention span, the way they learn, and the way they want to be taught.

First day in class

Take a look in your book…

Do you have the skills needed to understand this book about economics?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Point on budget line
0 30 a
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10 10
15 0
Assumptions
P_X = £2
P_Y = £1
Budget = £30

Applications calculate MRS

Let's calculate MRS

- $MRS = \frac{MUx}{MUy} = \frac{\partial U(X,Y)}{dX} / \frac{\partial U(X,Y)}{dY}$
- $U(X,Y) = X^2 * Y^4$
  - $\frac{\partial U(X,Y)}{dX} = 2X * Y^4$ $\quad$ $\frac{\partial U(X,Y)}{dY} = X^2 * 4Y^3$
- $MRS = \frac{2X*Y^4}{X^2*4Y^3} = \frac{2}{X} * \frac{Y}{4} = \frac{1}{2} * \frac{Y}{X}$

Screening of Students

Playing golf

- Score is not important

Brush Up in Mathematics – WHY?

- We need some math skills to be able to learn economics, to understand and interpret our results
- For students who have not taken mathematics courses for some time
- All that is required is a commitment to study and willingness

Maths Makes your Grades Better

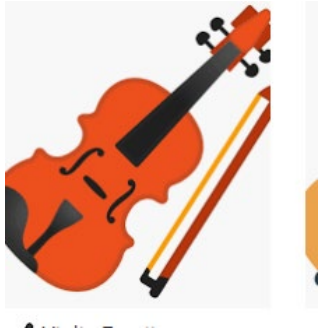
Your study of maths will also help you with related subjects that you may be studying here at Copenhagen Business School – Accounting, Finance and Statistics uses the same mathematical concepts as micro

Maths Requires Practice

There is a parallel between learning maths and play tennis or learning to play a musical instrument

It requires a lot of practice

Talent and natural ability can play a part – some are more naturally gifted

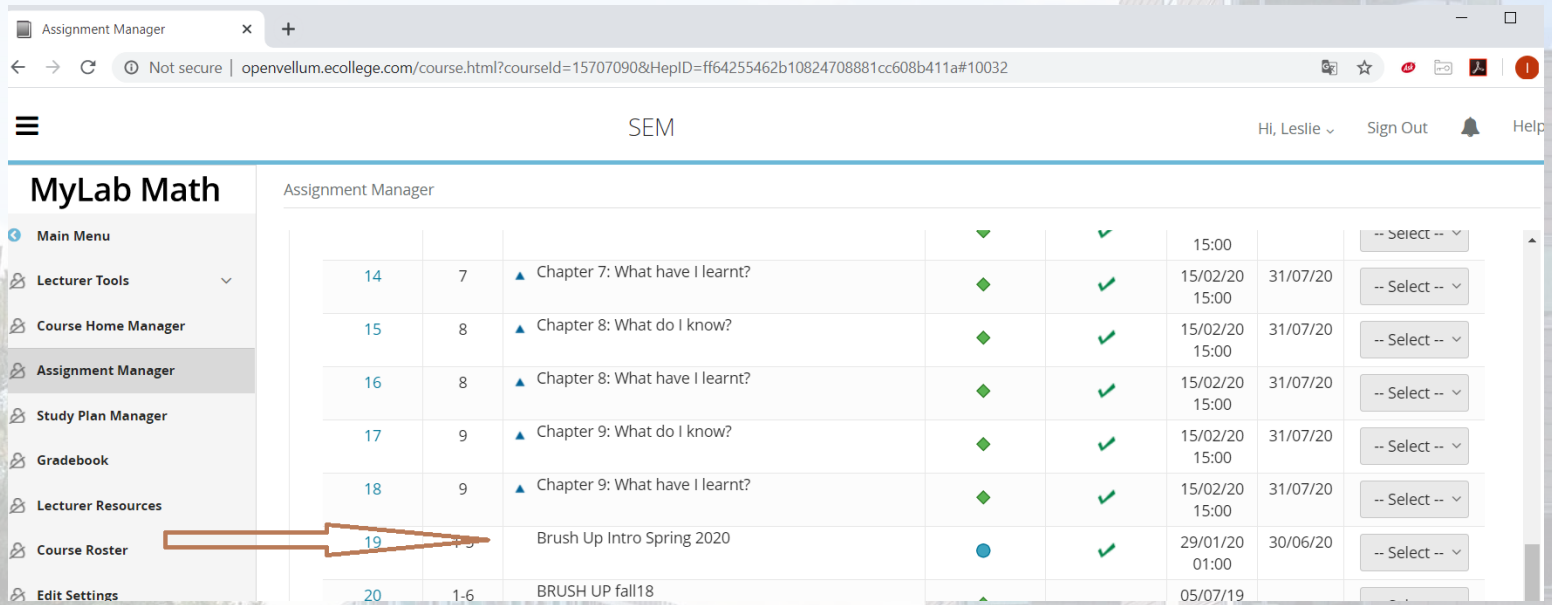


Brush Up in Mathematics – Do I need it?

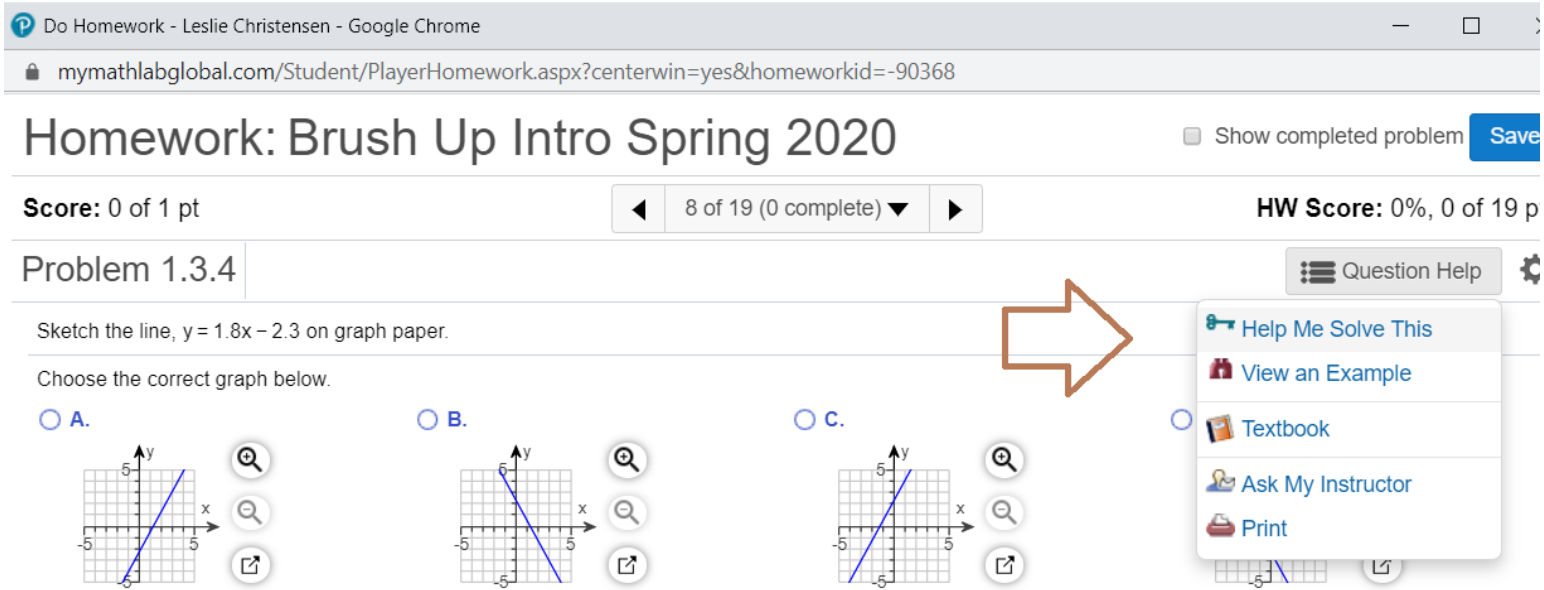
- *Mandatory* Test (2 hours) on
  - Open from *(5 to 6 days)*

- Feed-back on test:
  (day after the test)
  - Your skills are OK
  - Come to Brush Up

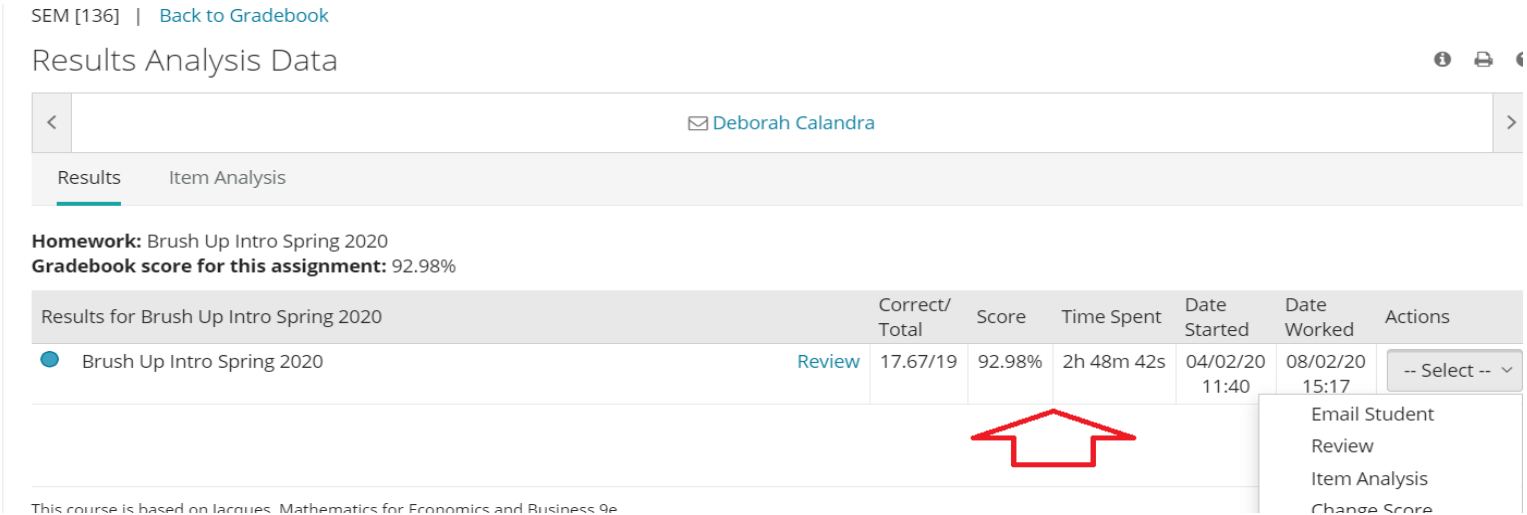
All our students at our Business School have free access to www.MyEconLab.com



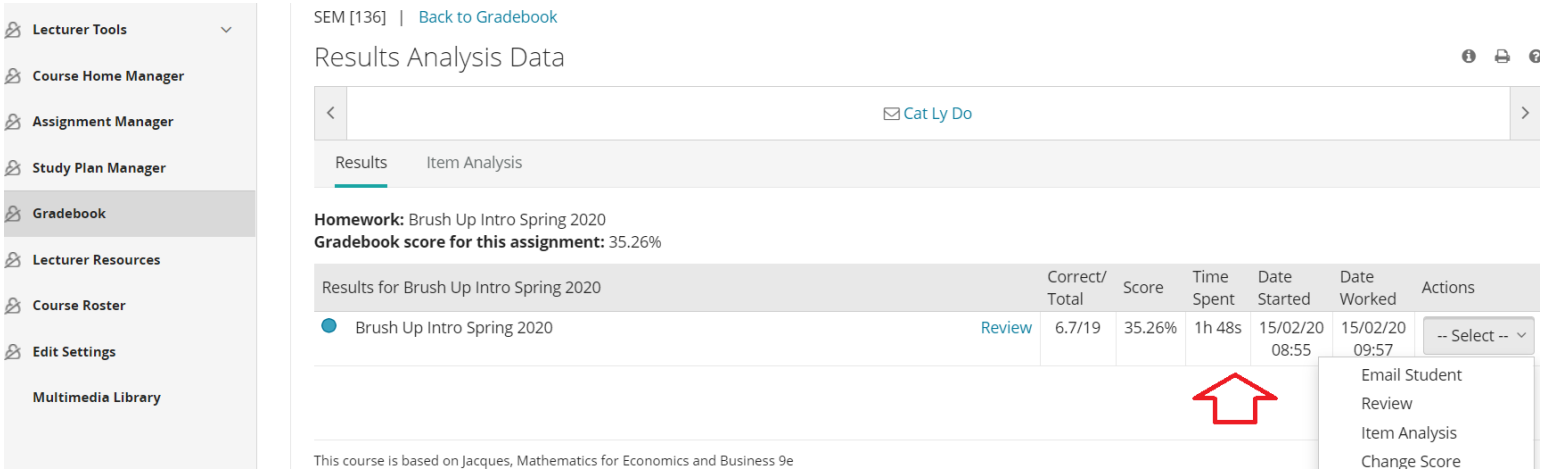
Students starts with this assignment – to be familiar with the platform



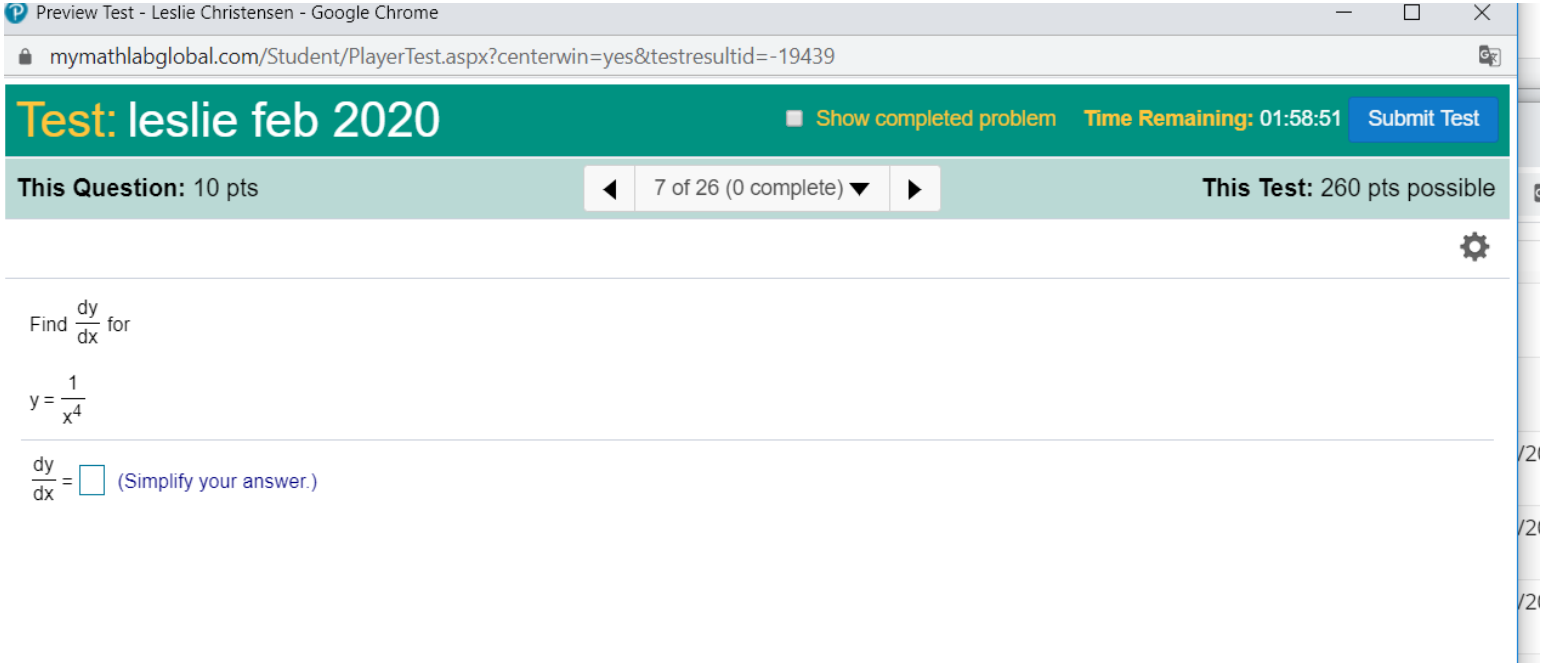
Need Brush Up?



Need Brush Up?



Question from the test



Feedback to students after taking the test

Dear student (25%)

Your skills in Mathematics are fine and you can without problems follow an intermediate course in Microeconomics. This means you do not have to come to our Brush Up in Mathematics this Weekend

If you want to join our Brush Up course and Workshops this Weekend, you are welcome and can do so by using the following *personal links:*

Dear student (75%)

We will help you to upgrade your skills in Mathematics:

We will start in room xx at 8.00 am with a short introduction to the day.

Because Mathematics is something you learn by doing please enroll yourself - by using the Link – into the four Workshops where you need to upgrade your skills and performance.

Agenda for Brush Up in Math

08.00 – 09.00 Intro

09.00 – 16.00 Four Work Shops with lectures and exercises:

W1 Linear equations and further algebra

W2 Other Functions

W3 Mathematics of Finance

W4 Differentiation/Partial differentiation

(You do not need to take them in numerical order – fx you can start with W4, then take W2, W3, W1)

Doodle link

https://doodle.com/poll/b68u7nyyapchth3r

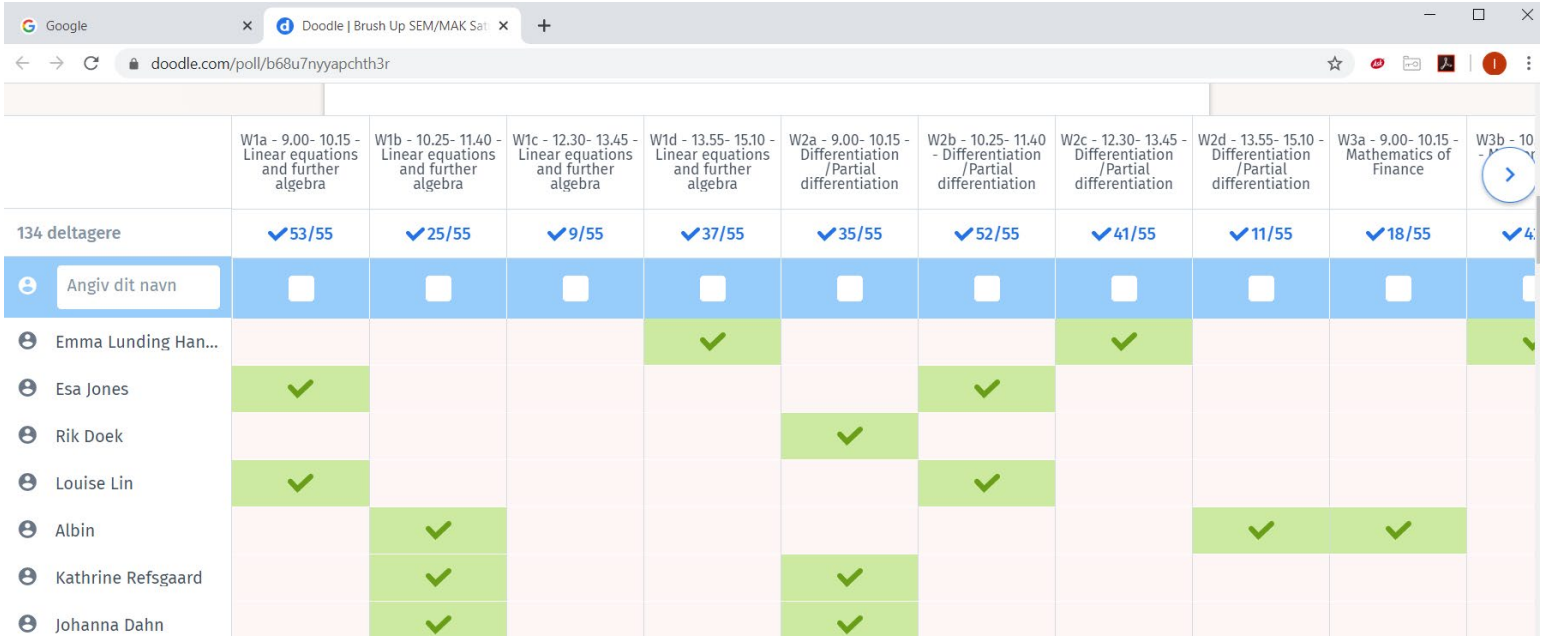
(You do not need to take them in numerical order – fx you can start with W4, then take W2, W3, W1)

PS Remember that the link *is personal* and remember to bring your own laptop and a print of your test.

There will be 4 different types of workshops where you can participate in one or more. It is important that you register which workshops you want to take. This is done by filling in this doodle form. The four different workshops run four times during the day, so you will be able to attend all of them if you so wish. The four different workshops run four times during the day, so you will be able to attend all of them if you so wish. You do not have to choose the workshops in the given order, as there will be taught the same at all the time slots.

The four different workshops are:
W1 - Linear equations and further algebra, room SPs14
W2 - Differentiation /Partial differentiation, room SPs12
W3 - Mathematics of Finance, room SPs08
W4 - Other Functions, room SPs07

They will each be repeated in the following time slots:
a - 9.00- 10.15
b - 10.25- 11.40
c - 12.30- 13.45


Google
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W1a - 9.00- 10.15 - Linear equations and further algebra
W1b - 10.25- 11.40 - Linear equations and further algebra
W1c - 12.30- 13.45 - Linear equations and further algebra
W1d - 13.55- 15.10 - Linear equations and further algebra
W2a - 9.00- 10.15 - Differentiation /Partial differentiation
W2b - 10.25- 11.40 - Differentiation /Partial differentiation
W2c - 12.30- 13.45 - Differentiation /Partial differentiation
W2d - 13.55- 15.10 - Differentiation /Partial differentiation
W3a - 9.00- 10.15 - Mathematics of Finance
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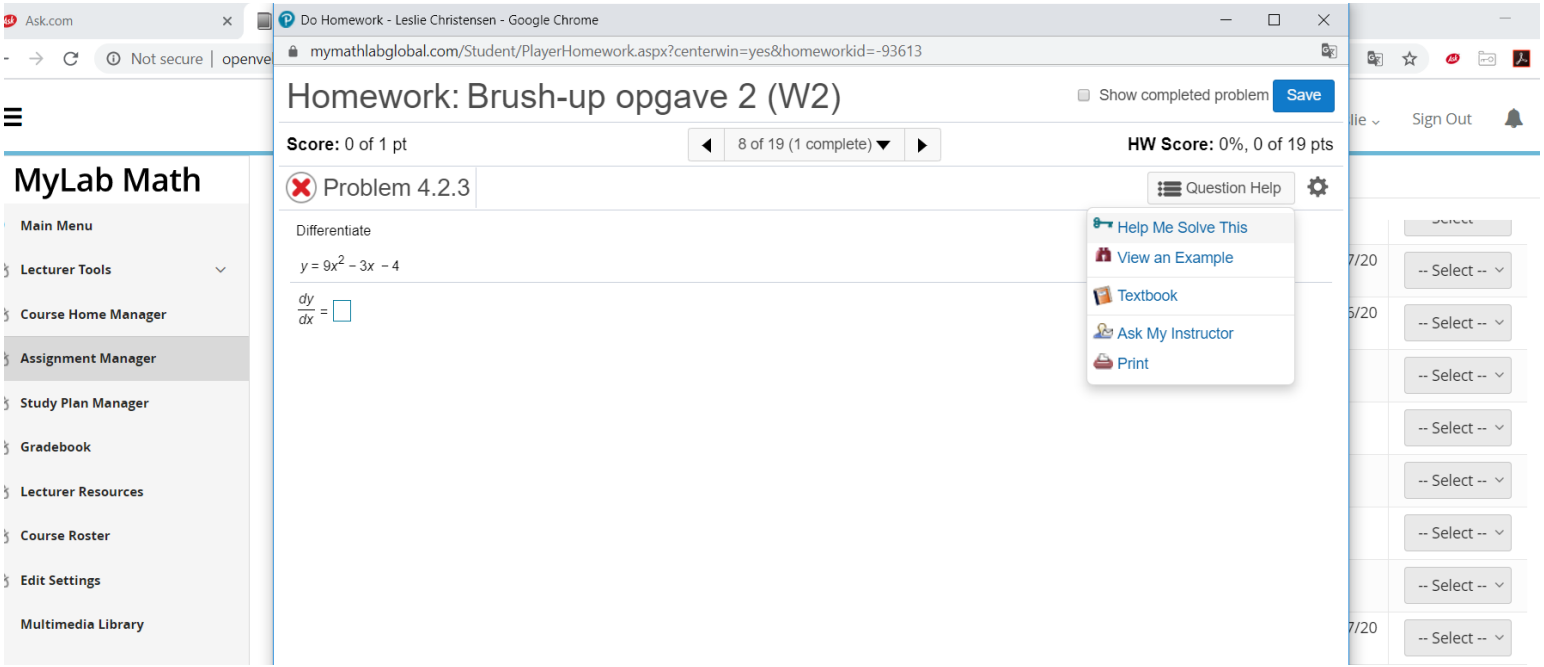
53/55
25/55
9/55
37/55
35/55
52/55
41/55
11/55
18/55
Angiv dit navn
Emma Lunding Han...
Esa Jones
Rik Doek
Louise Lin
Albin
Kathrine Refsgaard
Johanna Dahn

Lecturer Workshop 2

W2:
Math Brush-up – Differentitation

Thilde Stegenborg Andersen
tst.eco@cbs.dk


Ask.com
Not secure | openve
Do Homework - Leslie Christensen - Google Chrome
mymathlabglobal.com/Student/PlayerHomework.aspx?centerwin=yes&homeworkid=-93613
Homework: Brush-up opgave 2 (W2)
Show completed problem
Save
Score: 0 of 1 pt
8 of 19 (1 complete)
HW Score: 0%, 0 of 19 pts
Problem 4.2.3
Question Help
Differentiate
$y = 9x^2 - 3x - 4$
$\frac{dy}{dx} =$
Help Me Solve This
View an Example
Textbook
Ask My Instructor
Print
MyLab Math
Main Menu
Lecturer Tools
Course Home Manager
Assignment Manager
Study Plan Manager
Gradebook
Lecturer Resources
Course Roster
Edit Settings
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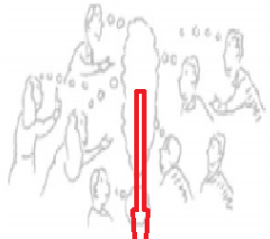
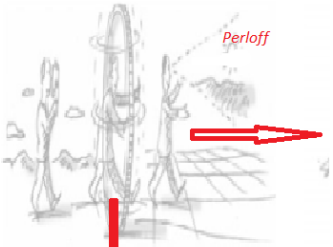
Sign Out
-- Select --

No *free riders*

All that is required is a commitment to study and willingness





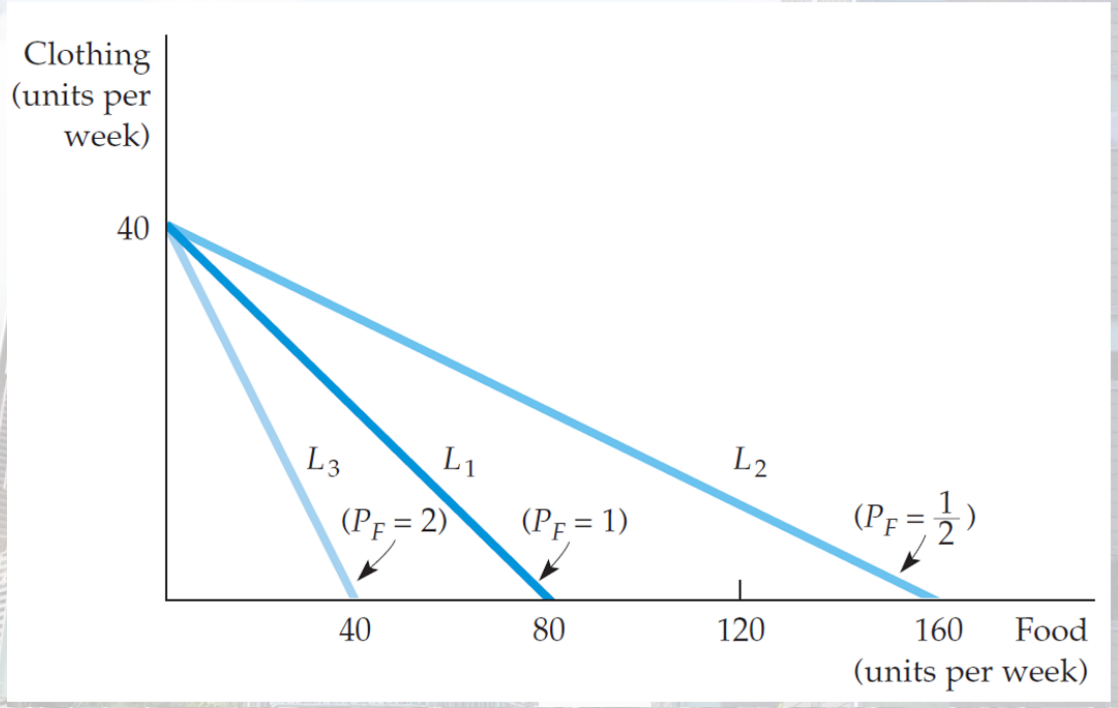
Ready to study Economics

Screening and working with the Platform

Workshop

Instructor challenges	Solution applied	Benefit for institution
large student numbers, low level of Maths among new students	unlimited practice, instant feedback in the platform, personalised feedback from the instructor	cost reduction, better time allocation

Do you remember this graph?



Applications (2): Calculate MRS

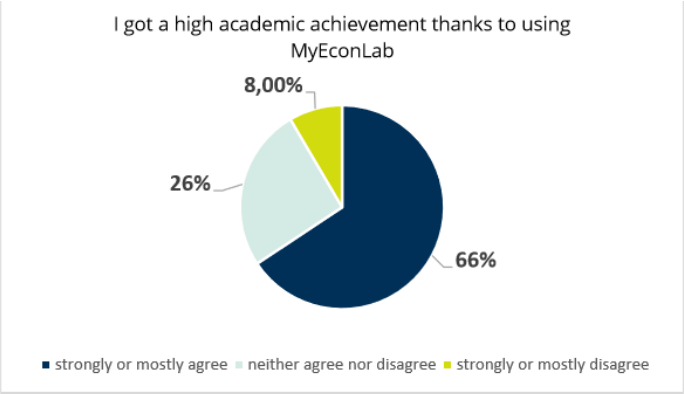
- $U(X) = 2X \quad dU(X) = 2$
- $U(X) = 2X^2 \quad dU(X) = 2 * 2X^{2-1} = 4X$
- $U(X) = \frac{2}{X} \quad dU(X) = -1 * 2 * X^{-1-1} = -\frac{2}{X^2}$

Every week 10 assignments on MyEconlab followed by feedback from an instructor

Benefits and Challenges of Integrating MyEconLab

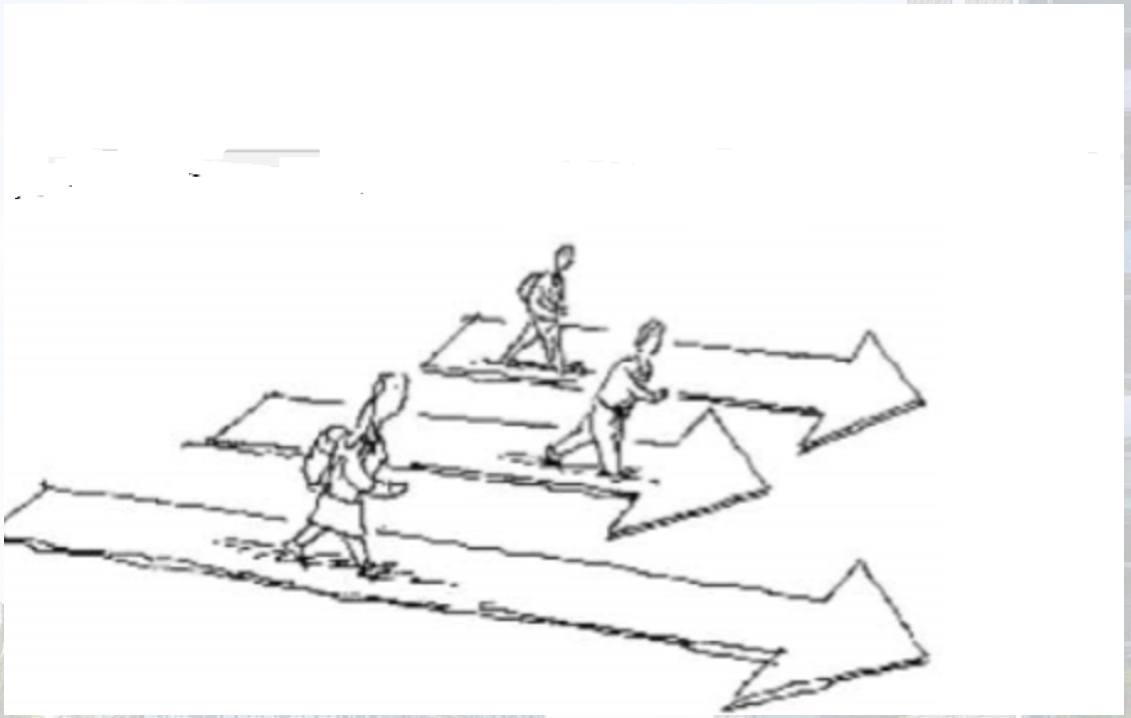
The students highlighted certain features in the MyLab as valuable for their learning experience:

- instant feedback,
- possibility to working in groups on the same exercises with different data points,
- unlimited access on various devices.



Graph 1 Extract from student's evaluation surveys

Students move at his/her own speed…



Benefits and Challenges of Integrating MyEconLab – from my point of view

- extended number of student contact hours with the subject,
- personalisation of instruction for large cohorts of students
- personalised feedback on assignment as well as on performance

Questions?