Introduction to Advanced Modern Macroeconmics

By Professor William T. Gavin

Classroom Stategy

- Every class will start a discussion of homework questions followed with a quiz

- You will have required reading for each class. This reading will often (usually) involve the basic mathematical elements of the standard classical economic theory. You are expected to learn how to do this on your own. Classroom discussions will include discussions of the homework material. The exam questions will be taken from the Quiz questions.

- Ideally, there will be little or no lecture. You are taking this class in English because the university wants you to learn to communicate about economic ideas in English.

- I will ask questions about economic ideas. You are expected to explain your ideas to me and to the other students. You are expected to question and challenge my ideas and those of your fellow students.

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- Calculate f'(x) for f(x) = 4x³, log(x), and eˣ

Quiz 1, January 24, 2017

1. Why did you decide to study economics?

2. What are the two largest economies in the world?

3. Where has a standard of living higher, in Mexico or in China?

4. How do we know which is higher?

5. What is a difference between microeconomics and macroeconomics?

6. What do some economists mean when they say that there is no difference, there is only economics?

7. Calculate f'(x) for f(x) = $4x^3$, log(x), and e^x

Sage for Undergraduates
(online version)

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Read chapter 1, pages 1-14 and chapter 3, pages 91-98

# 7.   Calculate f'(x) for f(x) = 4*x^3, log(x), and e^(3*x)
diff(4*x^3)

```
    12*x^2
```

diff(log(x))

```
    1/x
```

diff(e^(3*x))

```
  3*e^(3*c)
```
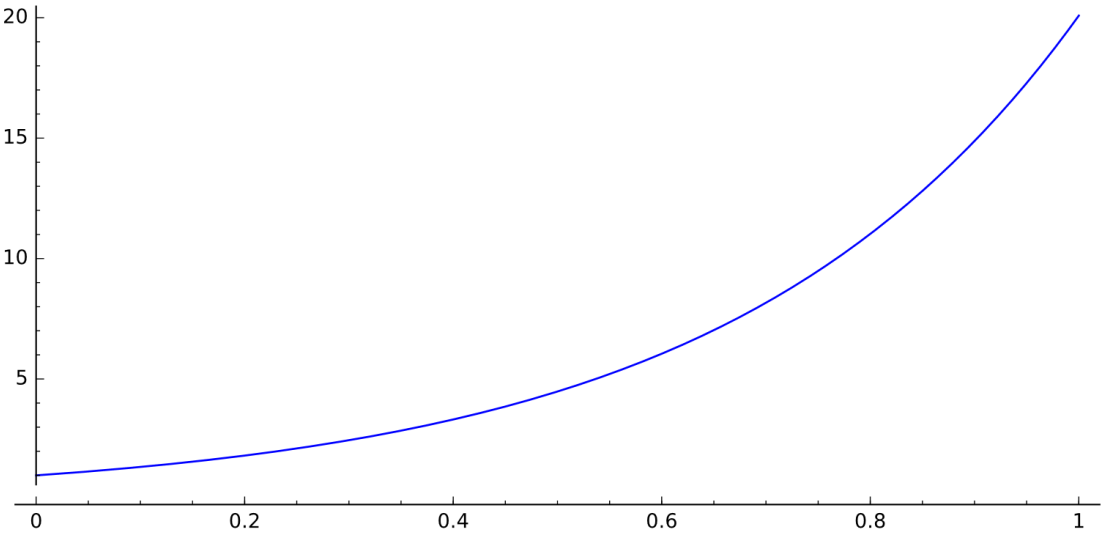
f(x) = 4*x^3
diff(f(x), x)

```
    12*x^2
```

var('x c')
f(c) = e^(3*c)
diff(f(c), c)

```
  3*e^(3*c)
```

plot(e^(3*c), 0, 1)

Homework for January 25, 2017

1. Read Chapter 2 of AMM

2. Replicate Figures 2.3 and 2.4 using a computer.

3. Refer to SAGE manual if you do not already use a software package that can create figures in the book. See pages

MODERN MACROECONOMICS

Max Gillman

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In the pdf version, chapter 2, pages 39- 54 for Jan 25.
Pages 55 to 76 for Jan 30.

If you wish to buy the paper version of the book, the official title is
Advanced Modern Macroeconomics: Analysis and Application
Max Gillman, 2011, Prentice Hall/Financial Times
https://www.amazon.com/Advanced-Modern-Macroeconomics-Analysis-Application/dp/0273726528