

Calculus I, Fall 2014

Queens College, Math 141

Prof. Christopher Hanusa

<http://qcpages.qc.edu/~chanusa/courses/141/14/>

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- ▶ First taste of mathematical rigor.
- ▶ Art rather than science

A normal day in this class

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- ▶ Lecture portion of class
 - ▶ My philosophy: More the why than the how
 - ▶ Key concepts
 - ▶ Some examples
 - ▶ Take notes! (Bring paper, pen(cil), colors)

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- ▶ Debrief, exit slips
- ▶ Learning after class
 - ▶ Review notes, Work through book details, Complete homework

In class

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- ▶ Preparing for class
 - ▶ Complete homework, Prepare questions, Read sections for the day.

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Class Introductions

Arrange yourselves into groups of four or five people,
With people you **don't know**.

- ▶ Introduce yourself. (your name, where you're from, your interests)
- ▶ What brought you to this class?
- ▶ Fill out **the blank side of** your notecard:
 - ▶ Write your name. (Stylize if you wish.)
 - ▶ Write a few words related to your name.
 - ▶ *Draw* something in the remaining space.
- ▶ Discuss with your groupmates why you wrote what you wrote.
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- ▶ Exchange contact information. (phone / email / other)
- ▶ **Discuss!** What is *a function*?
 - ▶ Brainstorm! How do you convey *functions* to friends?
 - ▶ Organize into themes.

Four ways to express a function

Question of the day

Let f be the function defined by $f(x) = \sin x + \cos x$
and

let g be the function defined by $g(u) = \sin u + \cos u$,
for all real numbers x and u . Then,

1. f and g are exactly the same functions
2. If x and u are different numbers, f and g are different functions
3. There is not enough information is given to determine if f and g are the same.

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Many of these questions have been curated by others.
(Thanks to Cornell, Grand Valley State)

Types of functions

Question: What types of functions do you know?

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True or False: The absolute value function is a linear function.

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Homeworks posted online; first one (many parts) due Tuesday.

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Exit slip: What was the most surprising thing about class today?