

Math 25 Introduction

Sep 21 2011

Instructor Information

- ▶ Instructor Name: Andrew Yang

Instructor Information

- ▶ Instructor Name: Andrew Yang
- ▶ Email: Andrew.C.Yang at dartmouth.edu

Instructor Information

- ▶ Instructor Name: Andrew Yang
- ▶ Email: Andrew.C.Yang at dartmouth.edu
- ▶ Office Hours: Monday, Wednesday, Friday 3:30pm - 4:30pm or appointment

Instructor Information

- ▶ Instructor Name: Andrew Yang
- ▶ Email: Andrew.C.Yang at dartmouth.edu
- ▶ Office Hours: Monday, Wednesday, Friday 3:30pm - 4:30pm or appointment
- ▶ Office: Kemeny 316

Class Information

- ▶ Webpage: www.math.dartmouth.edu/~m25f11. This site is very important!

Class Information

- ▶ Webpage: www.math.dartmouth.edu/~m25f11. This site is very important!
- ▶ Book: *Elementary Number Theory*, by Gareth A. Jones and J. Mary Jones

Class Information

- ▶ Webpage: www.math.dartmouth.edu/~m25f11. This site is very important!
- ▶ Book: *Elementary Number Theory*, by Gareth A. Jones and J. Mary Jones
- ▶ X-hour: Tuesday, 1:00pm - 1:50pm. We will use this for optional classes.

Homework Assignments

- ▶ Two types: Written and programming

Homework Assignments

- ▶ Two types: Written and programming
- ▶ Written: You solve problems, write down answers (which will usually require justification/proof), and hand them in. These will be turned in once a week.

Homework Assignments

- ▶ Two types: Written and programming
- ▶ Written: You solve problems, write down answers (which will usually require justification/proof), and hand them in. These will be turned in once a week.
- ▶ Programming: These assignments are geared towards the algorithmic aspects of number theory. You will write short programs and submit them via an automated uploader. There will also be parts of the 'programming' assignments where you will do theoretical analysis, and need to write down solutions with justification just like in the written assignments, and turn them in on papers. These assignments will be handed out every other week.

Grading

- ▶ Homework, two midterms, a final, and a final presentation.

Grading

- ▶ Homework, two midterms, a final, and a final presentation.
- ▶ Written HW = 25%, Programming = 15%.

Grading

- ▶ Homework, two midterms, a final, and a final presentation.
- ▶ Written HW = 25%, Programming = 15%.
- ▶ Two midterms, worth 15% each.

Grading

- ▶ Homework, two midterms, a final, and a final presentation.
- ▶ Written HW = 25%, Programming = 15%.
- ▶ Two midterms, worth 15% each.
- ▶ Final worth 20%.

Grading

- ▶ Homework, two midterms, a final, and a final presentation.
- ▶ Written HW = 25%, Programming = 15%.
- ▶ Two midterms, worth 15% each.
- ▶ Final worth 20%.
- ▶ Final presentation and paper is 10%. People will be assigned to teams of two randomly.

Intersection with other classes

- ▶ Math 25 is quite close to algebra - Math 31, 71, 81.

Intersection with other classes

- ▶ Math 25 is quite close to algebra - Math 31, 71, 81.
- ▶ Also some intersection with algorithms in computer science (CS31), although not a huge amount.

Advice – feel free to ignore any of this as you see fit!

- ▶ Most important: Keep up with the class! Falling behind is a recipe for disaster. The class starts easy, but gets progressively harder until it is quite non-trivial by the end.

Advice – feel free to ignore any of this as you see fit!

- ▶ Most important: Keep up with the class! Falling behind is a recipe for disaster. The class starts easy, but gets progressively harder until it is quite non-trivial by the end.
- ▶ Make sure you understand how to solve problems well. Most of your grade is determined by your ability to solve problems. In particular, you should review questions you get wrong on your homework and make sure you know how to do them correctly after the fact.

Advice – feel free to ignore any of this as you see fit!

- ▶ Most important: Keep up with the class! Falling behind is a recipe for disaster. The class starts easy, but gets progressively harder until it is quite non-trivial by the end.
- ▶ Make sure you understand how to solve problems well. Most of your grade is determined by your ability to solve problems. In particular, you should review questions you get wrong on your homework and make sure you know how to do them correctly after the fact.
- ▶ If you want to really understand math, you should not only do problems, but also **listen** to math (attend lecture or listen to friends talk about problems), **discuss** math (explain solutions to friends, etc.), and **read** the textbook.

Advice, part 2 – feel free to ignore any of this as you see fit!

- ▶ Browse the section of the textbook which will be covered in a class before attending the class. You don't need to understand everything, but getting an idea for the general flavor of the material will help your comprehension during lecture.

Advice, part 2 – feel free to ignore any of this as you see fit!

- ▶ Browse the section of the textbook which will be covered in a class before attending the class. You don't need to understand everything, but getting an idea for the general flavor of the material will help your comprehension during lecture.
- ▶ Skipping lecture might seem attractive (you aren't required to attend, and it doesn't impact your grade), but you really shouldn't unless you are confident you can understand everything on your own.

Advice, part 2 – feel free to ignore any of this as you see fit!

- ▶ Browse the section of the textbook which will be covered in a class before attending the class. You don't need to understand everything, but getting an idea for the general flavor of the material will help your comprehension during lecture.
- ▶ Skipping lecture might seem attractive (you aren't required to attend, and it doesn't impact your grade), but you really shouldn't unless you are confident you can understand everything on your own.
- ▶ Don't expect to understand everything completely at once. Repeated exposure to the same material several times will reinforce your understanding.

Advice, part 3 – feel free to ignore any of this as you see fit!

- ▶ If you start falling behind, seek help immediately. Remember, falling behind in the class is not good!

Advice, part 3 – feel free to ignore any of this as you see fit!

- ▶ If you start falling behind, seek help immediately. Remember, falling behind in the class is not good!
- ▶ Take the time to understand your mistakes. Take care to see what you did wrong on your homework assignments, why you got a question wrong, and how you'll get it right next time.

Advice, part 3 – feel free to ignore any of this as you see fit!

- ▶ If you start falling behind, seek help immediately. Remember, falling behind in the class is not good!
- ▶ Take the time to understand your mistakes. Take care to see what you did wrong on your homework assignments, why you got a question wrong, and how you'll get it right next time.
- ▶ Don't lose the forest for the trees. Yes, it's important to remember theorems, formulas, etc., but it's just as important to have good problem-solving strategies and understand how everything fits together.

Advice, part 3 – feel free to ignore any of this as you see fit!

- ▶ If you start falling behind, seek help immediately. Remember, falling behind in the class is not good!
- ▶ Take the time to understand your mistakes. Take care to see what you did wrong on your homework assignments, why you got a question wrong, and how you'll get it right next time.
- ▶ Don't lose the forest for the trees. Yes, it's important to remember theorems, formulas, etc., but it's just as important to have good problem-solving strategies and understand how everything fits together.
- ▶ Try to do a little bit of math everyday. Studying spread out over weeks is better than waiting until the last minute. And it's a lot less stressful!