MATH 1300 RECITATION

COLTON GRAINGER

resource	how to access
course website	https://math.colorado.edu/math1300
recitation website	https://quamash.net/math1300
prooflogger	https://prooflogger.quamash.net
recitation survey	https://goo.gl/forms/QB0LONND5wUEWcjB2

1. What is recitation?

- "The repetition of a prepared lesson or exercise; an examination on something previously learned or explained." (OED 2nd ed.)
- "A safe space in which asking questions for clarification on big ideas, their applications, and specific problems is encouraged." https://uaap.mit.edu/tutoring-support/study-tips/maximizing-lectures-recitation/optimizing-recitations
- "Work on projects in small groups with several of your classmates." https://math.colorado.edu/math1300/1300projects.html

2. How is recitation graded?

Thursday recitations account for 15% of the total grade in MATH 1300.

assessment	portion of total grade
written homework	10%
participation	5%

2.1. **Written homework. TL;DR:** You will be graded on your mathematical writing. You need to turn in your assignment at the *start* of recitation.

Here are Lee Roberson's goals for the written homework:

- You will be assigned several conceptual problems each week, [which will be due on Thursdays to your Teaching Assistant.]
- You are expected to write up complete, legible, and logical solutions to these problems.
- Each problem should be written using complete sentences to explain your steps.
- You may work together on homework to understand the problems and even to solve them (in fact, we recommend it).
- However, when you write up your solutions, this should be done independently, and in your own words. If you are wondering if you crossed the line, ask yourself "Could I start over and

Date: 2018-12-28.
Compiled: 2019-01-12.

redo this on my own, and would it basically look like this?" If not, then you are submitting someone else's work.

- Late homework will not be accepted, but your lowest two homework scores will be dropped.

This is my policy on collaboration:

> If you collaborate with other students, cite that on your homework submission. If you get help at office hours, cite that on your homework submission. If you get help from outside Internet sources, cite that on your homework submission.

Here is a warning from Dave Rosoff[1] to complete the *entire* assignment.

> I will assign more [than twice] as much homework as I will grade. You might decide this means that if you don't do most of it, I will never know. This is true in at most a limited sense: when the exam comes, I will probably find out whether you have been completing the homework or not.
>
> My goal is as follows: Every student who successfully completes all of the homework problems and *understands all the solutions* should be able to earn an A in this course. The exams are designed with this in mind. Therefore, I hope you will agree that it is in your very best interest to complete all of the assigned work, regardless of whether it is graded for credit.

2.2. **Participation. TL;DR:** You will be graded for presenting "proofs" in section or to a classmate who has done them. A proof consists of *explaining one of the ideas from the week's project.* For full credit, please post to `https://prooflogger.quamash.net` *before the end of recitation*.

When we first learn of a proof in class, only members of the teaching staff, TAs and LAs, are "qualified listeners". Anyone who presents a satisfactory proof to a qualified listener also becomes qualified and may listen to proofs by other students.

Here's an example. Say I'm in section `023`. If I made the following 16 posts in a timely fashion, I would earn 80 points for full participation credit:

- `#week1` I presented to `@calebpoppe` in recitation `#023`
- I presented to `@calebpoppe` `#week2`. woot! `#023`
- ⋮
- `#023` `#week14` I explained a proof to `@samwilliams`
- `#week15` I explained the recitation project to `@samwilliams` in `#023`
- I met with `@samwilliams` for the final review. `#023` `#week16`

3. Prooflogger

3.1. How do I create an account on prooflogger?

1. Go to `https://prooflogger.quamash.net`.
2. Register for an account.
   - Username? Try `firstnamelastname` or go with your identikey, e.g., `cogr4643`.
   - Email? You must use your `colorado.edu` address, e.g., `colton.grainger@colorado.edu`.
3. Confirm your email.
   - The confirmation message is from `prooflogger <colton.grainger@colorado.edu>`.
   - You may need to check your spam inbox.
4. Make a test post with `#week0` and `@coltongrainger` at `https://prooflogger.quamash.net/thewire`.

[1] `https://github.com/daverosoff/Math352ModelCourse/blob/master/M352_S2013_syllabus.tex`

3.2. **What proofs am I expected to present?** Each Thursday in recitation, I will announce (in person and on this site) a single proof that we'll present the following week. The "proof" will come from the upcoming weekly recitation project.

3.3. **Who am I expected to present proofs to?** If you

- present a proof before the end of recitation to Colton, one of the LAs, or a fellow student who has become a qualified listener, and
- you post it to prooflogger,

then you will earn 5 participation points for the week, out of a total of 80 for the semester.

3.4. **What should each post include?** Include your `#section_number` hashtag, the appropriate `#week_number` hashtag, and mention `@username` the person(s) who you presented your proof to.

data	format	requirement
name of listener	`@calebpoppe`	spell usernames correctly
week hashtag	`#week1`	use the same week number as the written homework
section number	`#023`	please, add leading zeros; your number has *3 digits*

3.5. **When should I listen to proofs?** In recitation. You should offer to listen to proofs after you have presented the proof to a qualified listener. When listening to a proof, you should try to politely give constructive feedback.

3.6. **How do I report abuse?** At the bottom of each page (and by each post), there's a link to "Report this". Please use it. Prooflogger is an extension of the classroom. I will tolerate neither honor code violations nor harassment.

3.7. **What type of software is prooflogger?** Prooflogger is a multi-user "microblog" served with PHP, MariaDB, and Elgg[2] from a linode[3] machine registered to Colton Grainger. (In fact, prooflogger is just my naive reimplementation of Andrew Watkin's 2008 Math Proof Log[4] for Math 23a.)

audience	what information is visible to them
the public	no information
other students in MATH 1300	your username and your posts
learning assistants in MATH 1300	your username and your posts
teaching staff in MATH 1300	your username, posts, email, and activity history

3.8. **Who will have access to information on prooflogger? For how long?** I will backup and erase the database at the end of the semester. If you would like a copy of your posts, please let me know.

3.9. **Do I have to participate?** No. I will collect a survey at the beginning of the semester: you may opt out of using prooflogger. In this case, for participation credit, I will ask you to sign an attendance sheet before leaving recitation. I encourage you to participate, however, because it's an easy way to stay on track. Again to take advice from Dave Rosoff[5]:

> The course is designed so that you will do best if you work at a *modest but constant pace* throughout the term. Cramming might work too, but not as well—and not as permanently, which is really the point.

[2] `https://elgg.org/`
[3] `https://www.linode.com/`
[4] `https://pitf.harvard.edu/project/math-proof-logger`
[5] `https://github.com/daverosoff/Math352ModelCourse/blob/master/M352_S2013_syllabus.tex`

4. About the TA

Colton Grainger. He/him pronouns. To be addressed as "Colton" please. Pronunciation[6].

4.1. **Contact information.** Please be aware:

contact	how to access
Colton's MARC hours	Mon 5–6p, Wed 6–8p, in MATH 175
find a time to meet	`https://meetme.so/coltongrainger`
email me	`colton.grainger@colorado.edu`[7]
raise a complaint	`lee.roberson@colorado.edu`[8]
leave anonymous feedback	`https://math.colorado.edu/feedback`

4.2. **Typical recitation.** Here's how a typical recitation was organized last semester:

- After preliminary remarks, I subdivide the class into peer groups of 4–5 students.
- I task each group to come to a consensus on a set of scaffolded arguments that makes rigorous either the example or the theory introduced in the preliminary remarks.
- I ask each group to select a representative to present and justify a particular step in the derivation, at which time the class is expected to ask constructive questions.
- I give a summary overview, and class ends with an exit quiz.

This semester, I am no longer administering exit quizzes. (See below.)

4.3. **Student evaluations.** Here are select comments from my Fall 2018 evaluations. Following the example set by Kate Stange[9] I have included negative comments and tried to give a representative cross-section.

- Colton challenged our knowledge in this class to a very beneficial degree and I don't think any other could replicate that.
- I appreciate the enthusiasm and love for calculus that you bring into the classroom. You're always willing to politely help out students with questions, and you have the knowledge to give them thorough answers. I realize this is a college course, but your grading also tends to be tough (more applicable at the beginning of the semester, I believe), which can be frustrating when the work is correct but the style is a little off. You're probably preparing us for the test though, which is a fair reason!
- Please call on students less in class, I don't think any of us enjoy the surprise, even when we know the material. Having volunteers write their answers up on the chalkboard is a decent way to get the entire class involved though (if you don't put them on the spot)!
- I did not feel the attendance quizzes were helpful, they were beyond the scope and level of this class and did not serve much purpose for me.

5. Epigram

Calculus is the canonical entry to undergraduate mathematics. *We all want you to win.* From Richard Hamming (talk at Bellcore, 7 March 1986):

> *Therefore, go forth and become great scientists!*

[6] `https://youtu.be/oMFaJDEVHVQ?t=2`
[7] `mailto:colton.grainger@colorado.edu`
[8] `mailto:lee.roberson@colorado.edu`
[9] `https://math.colorado.edu/~kstange/evals-brown-comments.html`