

MA/CSSE 474 final exam process. August 17, 2019

The exam will be on Moodle

Once you start the exam, you will need to do your final submission within three hours, or at 11:55 PM Saturday, whichever comes first. **Note that this means you have three hours altogether, not three hours per submission.** Even if Moodle lets you submit later, I will not count it unless it is within three hours of the time when you first see the exam.

What physical things do you need?

You will probably want to print the [notation and terminology](#) document before the exam (it will be available online, but it will be a hassle to use that way).

You may need to scan or photograph your essay question work and email it to me immediately after the exam. Please look at the document carefully before you send it, to make sure that it is readable.

Resources you can use during the exam.

Moodle, pens or pencils. Blank paper. Notation and terminology document.

One blank sheet of paper (except that your signature should be at the top left of both sides) and a 2-sided

You will answer all non-essay questions and the short essay questions in Moodle. For essay questions, if you wish, you can write “dropbox” in the Moodle answer box and scan/photograph your written work immediately after the exam.

Optional: Something to drink, tissues, etc., whatever you need to be comfortable.

Before, during, and after the time when you take the exam, you should not communicate with anyone else about the exam content prior to Sunday.

Special characters the exam questions:

You can get many special mathematical symbols by clicking the “Omega” or “square root” buttons in the Moodle editor. Or you can simply write things like “epsilon” or “is an element of” in English.

The **material covered by the exam** is described on the schedule page, Session 41.

Instructions for some parts of the exam

1. For each of the following statements, choose T or F to indicate whether it is True or False. If it is sometimes False, you should choose False.
You do not have to give proofs or counterexamples. For each part, you get
 - 1 point for choosing IDK (I don't know),
 - 3 for circling the correct answer,
 - 1 for circling an incorrect answer and
 - 0 for leaving it blank.

In each of these problems, you will be asked to classify a given language into one of the five categories listed below. Each category is a subset of the one that comes after it. You should choose:

R if the language is regular,
CF if it is context-free but not regular,

D if it is decidable but not context-free

SD if it is semi-decidable but not decidable

NSD if it is not semi-decidable

Scoring: Correct answer: 3, adjacent and on correct side of D|SD line: 2, wrong side of line -1. Blank 0. What do I mean by "correct side of the line?" Everything above the line is decidable; the ones below the line are undecidable.

Essay questions with short answers. Write your answers in the given boxes.

The remaining questions need longer answers. You can enter your answers in the provided text boxes, or write them out and scan/photograph them as on the midterm exam. If you do the latter, write "Drop box" in the Moodle text box for that problem.