CS 202 Spring 2015 — Final Exam

Name: _____

You have lots of time for this exam!

150 minutes, to be exact. That's more than twice as long as the time given for an in-class exam, but this exam has fewer than twice as many problems. **You've got more time, for fewer questions.** That means you should really take your time on this exam, including reading these instructions.

Read briefly through the whole exam before you start.

Keep track of your time, and don't spend too much time on any one question.

Work out your solution to each problem on scratch paper first. Your packet has one sheet of blank paper in it, and the proctors should have more.

No calculator is allowed, though there is some arithmetic. Be prepared to do multiplication, etc. longhand on a separate sheet of scratch paper. Plan things out symbolically first, and only do manual computations once you know you're doing the correct ones. Show your symbolic work as part of your answer.

Except where otherwise indicated, always show your work or otherwise explain your answer. A correct answer with no supporting argument may not earn much credit. Don't overdo it, though: there's no need to say stuff like "by algebra" to explain how you derived a result; I can see that just by reading what you did.

Similarly, a computation with no explanation of what it means, or why you know it's valid, may also not earn much credit. Write full mathematical statements, with proper symbols, to show me what your computations mean.

For questions that involve arithmetic, your process (the symbolic formula you're trying to evaluate) is more important than your result. You don't need to compute decimal values of fractions, or even reduce the fractions in your answers. So you can write $\frac{21}{12}$ rather than $\frac{7}{4}$ or 1.75, for example; but $\frac{3}{2} + \frac{3}{12}$ is not okay and needs to be simplified further.

Nearly every computational problem on this exam has an elegant solution. You will receive only partial credit for brute-forcing the numerical result. Remember, process is more important than the final computed value.

Draw boxes around every answer you write, in order to distinguish it from your other work. Please write legibly.

If you think that a question is unclear or ambiguous (or if you think that there is an error), make a good-faith effort to interpret the intent of the question, and explain your interpretation in your solution.

Good luck, and have a great summer!

Stay cool — you got this!

Question:	1	2	3	4	5	6	7	8	9	Total
Points:	6	5	3	3	3	3	10	5	5	43
Score:										