

UPDATED GENERAL INFORMATION – JUNE 2, 2019

The final examination

This will take place in class on **Friday, June 7**. There will be no class activity during the week of June 10.

The examination will be similar in structure to the midterm examination, with 70 per cent mathematical problems and 30 per cent definitions or historical information. One difference will be the opportunity to earn extra credit on the historical part. Looking further at the study problems for the second and third quizzes is very highly recommended. Other sources of study problems like earlier update files, old exam files, old review files, exercise and solution files, and files with solved examples (for example, on continued fractions, Diophantine equations, the Chinese Remainder Theorem, continued fractions, the Fibonacci sequence, complex numbers (cubic formula and impedance), logarithms, the Pappus – Guldin Centroid Theorems, geometric locus problems. Yet another specific recommendation is to be familiar with the results in the files on locus problems in coordinate geometry and the file

<http://math.ucr.edu/~res/math153-2019/history11c.pdf>.

An updated historical file with additional names and information will be posted by class time on Monday, June 3. The historical portion of the exam may also contain questions asking for the definitions or statements of key concepts (for example, the Chinese Remainder Theorem, the so – called Fibonacci sequence, the so – called Gregory infinite series for $\pi/4$, the “Little Fermat” Theorem, the so – called Fermat’s Last Theorem, the modern coordinate terminology for a geometric locus in the plane, Cavalieri’s Principle, and the Newton Binomial Series. Other historical questions worth considering are comparing similarities and differences in the work of Descartes and Fermat on coordinate geometry, and likewise for the work of Leibniz and Newton on the invention of differential and integral calculus; in the latter case, a comparison of their work with that of their predecessors is also worth considering (past exams have had questions of these types).

Return of final examinations

My general policy is that students are welcome to take and keep their final examinations, but I might be unavailable at various points throughout the summer. Students who want to retrieve their examinations should contact me by electronic mail so that arrangements can be made. Probably the simplest and most efficient way to return exams is by electronically sending scans of the pages, but the physical copies will also be available for some time. Appeals and queries regarding grading may be submitted as for the midterms with no formal deadline aside from standard University regulations.