

Math 4060 (Cherry) Test #2 Review

Test Date: Monday, April 10

You will have some choice of problems on the test. You will be asked to write solutions to four. The test will have four sections:

Section I. You will be asked to give Hartshorne's proof of one of the following results from his section 5:

Proposition 5.1, Proposition 5.4, Proposition 5.6, Proposition 5.7, or Proposition 5.8.

Section II. You will be asked to prove that parallelism is an equivalence relation in an incidence geometry if and only if Playfair's Axiom P is satisfied. This is Hartshorne's Exercise 6.6 (b) and (c)

Section III. A choice of one of two problems similar in spirit to the homework we did in section 7 or 9 of Hartshorne. You might also be asked to give proofs of Propositions 9.2 or 9.6.

Section IV. A choice of one of two constructions with Hilbert tools, similar in spirit to Exercises 10.1–10.4.

Although you will have a choice of problems in most sections, you must do one problem from each of the four sections.

Do not feel obligated to memorize the Hilbert axioms by number. You will be given a copy of the Hilbert Axioms hand-out to use during the test.

Extra Office Hours: Friday, April 7, 12:30–2:30 p.m. and Sunday, April 9, 2–5 p.m.