MAT360 Spring 2015
Practice Final

The actual exam will consist of twelve problems.

Test covers all the material from Kiselev's book from page 1 to page 161(§135-142 and a paragraph on Trigonometric functions are excluded).You are also expected to be familiar with Viro's "Lecture notes on isometries", "Lecture notes on similarity","Lecture notes on inversions " (up to 1.E inclusive). All types of problems discussed below will be on the test. If you are planning on getting a passing grade (C) you should be able

- to prove all the foundational theorems It is expected that you will reproduce a proof from the book or will come up with an equivalent proof. "Proofs" that derive theorems from their corollaries will not be accepted.
- to do all the construction problems discussed
- to do all the simple construction problems(See below).
- to solve *all* the easy problems.

Those who what to get a grade higher then C should try to solve all the problems given below. Mentioned abilities are , of course, necessary but not sufficient for passing the test. The actual test problems will not repeat problems of this practice exam.

The test will contain four groups of problems, 3 problems per group (see below). In each group one problem will be on the material covered before the midterms. Two problems from the same group will be on the new material that we have studied after the II midterm.

1 Questions to prove a theorem from the book (from page 1 through page 161)

The following list of theorems are considered as central. The set of theorems whose proofs you are supposed to know includes but not limits to this list.

1. Foundational theorems §24 ,§35 ,§40 ,§42 ,§44 ,§48 ,§50 , §71 ,§73, §104 ,§105 ,§107 ,§109 ,§123 ,§125 ,§148 ,§159 ,§161 ,§170 ,§171 ,§174 ,§175, ,§179 ,§185 ,§188 ,§190 ,§194 ,§196 ,§198 and all theorems from lecture notes.

2 Construction problems discussed in the book

Bring a compass and a ruler and be prepared to repeat construction of one of the problems discussed in the book §61-§69,§74,§96-§102, §108,§127-§134, §172, §173, §181, §182, §183, §187

3 Construction problems

1. Simple problems 115-133,200-206 ,207-212, 244,245,247,249,255,256,257,267,373,376,377,378,390,391,(392 is easy if you know how to do 389),393-399,414-422
2. Harder problems 134-139, 246,248,265,266, 372,379,380,382,383,389
3. Hard problems 213-224

4 Problems on proofs

1. Easy 225,226,227,228,229,232,233,235,237,238,239,240,241,243,250,251,253,258,259,260, 262,264,268,270,271,274,275,345-351,353,384,385,400,402,404,405
2. Harder 230,231,236,242,252,254,269,272,273,386,401,403,407,410