

Math 270, Spring 2008

FINAL EXAM Thursday, June 12, 10:30 – 12:30, 203 Eckhart (Graduating seniors ONLY see me individually to arrange early exams.) The exam covers material from the entire quarter.

NOTE: There will be class on Thursday, June 5 but there will be no new material done that day. The last problem set is due that day. This problem set includes some problems on new material and some problems to help review some of the material of the last few weeks.

(Final) Problem Set 9

Reading: Chapter IV, Sections 1 and 2; Chapter IX; Chapter X, Sections 1 – 3

Problems (due Thursday, June 5) p. 149, 2,3; pp. 302–303, 1,2,3; p. 186, 10, 13; pp. 188–189, 25, 33; pp. 204–205, 3, 11; pp. 238, 8, 11;

Extra Problem

Exercise 1 Suppose U is a simply connected, open subset of the upper half plane \mathbb{H} such that $\mathbb{H} \setminus U$ is bounded. Show that there is a unique conformal transformation $g : U \rightarrow \mathbb{H}$ satisfying

$$\lim_{z \rightarrow \infty} [g(z) - z] = 0.$$

(Hint: Consider $f(z) = 1/g(1/z)$.)