

Math 4200-001
Week 14 concepts and homework
5.1-5.2
Due Friday December 4 at 11:59 p.m.

This final homework assignment is optional - if you do it, you can choose to use it for 30% of your final exam score. Unlike on our midterms and on the final exam itself, I encourage you to collaborate on this assignment as if it was a regular homework assignment.

5.1: 10, 11, 12.

5.2 1, 4a, 6, 7, 9, 10, 17, 24, 26.

w14.1 Use the result of 5.1.12 to show that the only conformal bijections of the Riemann sphere are given by the fractional linear transformations. Hint: If a conformal bijection of the Riemann sphere maps ∞ to ∞ then restricting it to \mathbb{C} yields a conformal bijection of \mathbb{C} to itself.