Math 210A Homework Assignment (09/30 – 10/07)
Assignment will be collected on 10/17 the Monday during the class.

Key notions introduced this week:

(1) Power series, radius of convergence;
(2) Differentiable functions, holomorphic functions, infinitely differentiable and analytic functions;
(3) Cauchy-Riemann equations, harmonic functions;
(4) Conformal maps, Riemann sphere and Mobius transformations;
(5) Projective space, homogeneous spaces, cross ratios and almost homogeneous spaces.

Homework problems:

§3.1. 6, 7.
§3.2. 1, 14, 19.
§3.3. 1, 7.
Bonus Problem §3.2. 21.