

1. Book problems:

p. 53 3b, 5, 10
p. 59 1b, 1d, 3, 7, 8c

2. Describe the mapping $w = f(z) = 1/z$, from the extended z -plane to the extended w -plane.

3. Show that a circle in the complex z -plane corresponds to a circle on the Riemann sphere. *Hint:* Use the fact that a circle on the sphere is given by the intersection of a plane and the sphere.