

Homework 3

Proofs and explanations should always be written using complete English sentences. You should always explain and justify each of the steps in your solution, unless otherwise noted. Write your name and "Math 114" on the top right of the first page.

1. Sarason, II.8, exercises 1 and 2.

2. Sarason, II.15, exercises 1 and 3.

Remarks:

In exercise 1, it may help to think of the holomorphic function which sends z to z^3 .

The solution of exercise 1 generalizes to polynomials of higher degree.

In exercise 3, u is not defined at $(0, 0)$.

3. Sarason, II.15, exercise 4.

4. Sarason, II.16, exercises 1 and 2.