Complex Analysis

Math 312 Spring 1998 MWF 10:30am-11:25am
Buckmire Fowler 112

Worksheet #1 (Monday 01/12/98)

SUMMARY What do we know about complex numbers so far? Here is a list of properties and operations we know about to date. Make sure you understand how each one works.

Consider 2 complex numbers $z = x + \mathbf{i}y$ and $p = a + \mathbf{i}b$

- EQUALITY
- CONJUGATE
- MODULUS (absolute value)
- ADDITION
- MULTIPLICATION
- DIVISION

Exercise
With your nearest neighbor compute the value of the expressions A and B so that they are complex numbers of the form $x + \mathbf{i}y$.

$$A = \frac{3 + 2i + (-2 + i)}{3 - 4i}, \quad B = (\frac{6}{5} + 2i - (3 - \frac{3}{5}i))$$

Then answer the following questions:
(a) Is A = B?

(b) Which is bigger, A or B?

From this example write down one significant difference between the set of real numbers and the set of complex numbers: