Complex Analysis

Math 312 | MWF 10:30-11:25am
Spring 1996 | 201 Fowler

Ron Buckmire ~ 402 Fowler ~ 259-2536 ~ `ron@oxy.edu` ~ Mon 1-3pm & Thu 1-2pm

---

Worksheet #7 **(Wednesday 02/07/96)**

SUMMARY regions in the complex plane

UPDATE: **Algebraic/Transcendental Numbers**
A number z is called *algebraic* if it is a solution of a polynomial equat ion
$a_0 z^n + a_1 z^{n-1} + \ldots + a_{n-1} z + a_n = 0$ where $\{a_i\}$ are *integers or rationals*. Numbers which are not algebraic, are called *transcendental numbers*.

Definitions
NEIGHBORHOOD

DELETED NEIGHBORHOOD

INTERIOR POINT

EXTERIOR POINT

BOUNDARY POINT

ACCUMULATION POINT

OPEN SET

CLOSED SET

BOUNDED SET

CONNECTED SET

DOMAIN

REGION

functions of a complex variable
Given a set S of complex numbers, a function f is a rule which assigns to ea ch $z \in S$ a complex number w. The set S is knows as the **domain of de finition** of f. The value $w = f(z)$ can be written as $u + iv$, in other words:

$$w = f(z) = f(x + iy) = u(x, y) + iv(x, y)$$