Lec 5

Cauchy - Riemann Equations.

We say it is possible to differentiate a complex function if it is analytic.

Recall: $f(z)$ can be written as $u(x,y) + iv(x,y)$

$u(x,y)$ and $v(x,y)$ are real functions.

$f(z)$ is analytic (differentiable) if

$$\frac{\partial u}{\partial x} = \frac{\partial v}{\partial y}$$

and

$$\frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$$

These equations are known as the Cauchy - Riemann equations