Analysis Qualifying Exam Solutions

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Overview 1

Results and Definitions to Know 2

2.1 Uncategorized

Theorem 2.1.1 *Cauchy Riemann Equations*

Theorem 2.1.2 *Cauchy Integral Formula*

In Progress Problems | 3

Problem 3.0.1

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Suppose that f is analytic in a domain containing $|z| \leq 1$. If $|f(z)| \leq 1$ for each $|z| \leq 1$, show that f ahs at least one fixed point in $|z| \leq 1$. That is, prove there exists a point p with $|p| \leq 1$ and $f(p) = p$.

Davit's suggestions: Maximum Principle, Schwarz Lemma