Analytic functions

1 Failure of continuous and differentiable functions

2 Power series

Proposition 1. Let $(\mathbf{k}, \|\cdot\|)$ be a complete non-archimedean field and $\sum_{n=0}^{+\infty} a_n$ be a series in $\mathbf{k}$. Then the series $\sum_{n=0}^{+\infty} a_n$ converges if and only if $\lim_{n\to+\infty} a_n = 0$. Yang: To be checked.

3 Analytic functions

Definition 2. Let $(\mathbf{k}, \|\cdot\|)$ be a complete non-archimedean field.

Appendix

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