Math 129: Algebraic Number Theory
Homework Assignment 11 (last assignment)

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Due: Thursday, May 6, 2004 (last day of class!)

1. Turn in a very rough draft or outline of your project. Turn anything in and get a perfect score on this homework problem.

2. Prove that the product formula holds for $\mathbf{F}(t)$ similar to the proof we gave in class using Ostrowski's theorem for $\mathbf{Q}$. You may use the analogue of Ostrowski's theorem for $\mathbf{F}(t)$, which you had on a previous homework assignment. (Don't give a measure-theoretic proof.)

3. Prove Theorem 14.5 from the lecture, that "The global field K is discrete in $\mathbb{A}_K$ and the quotient $\mathbb{A}_K^+/K^+$ of additive groups is compact in the quotient topology." in the case when K is a finite extension of $\mathbf{F}(t)$, where $\mathbf{F}$ is a finite field.