1099-13-87 **Roger A Wiegand*** (rwiegand@math.unl.edu), Department of Mathematics, University of Nebraska, Lincoln, NE 68588-0130. *Lots of questions, and a few answers, about spectra of commutative rings of dimension two.* Preliminary report.

Can the unit square $0 \leq x, y \leq 1$ be the maximal ideal space of a two-dimensional commutative ring? Perhaps surprisingly, the unit interval *is* the maximal ideal space of a one-dimensional ring.

On the Noetherian side, suppose R and S are two-dimensional affine domains over the rational numbers $\mathbb{Q}$. Are Spec$R$ and Spec$S$ homeomorphic? If $\mathbb{Q}$ is replaced by the algebraic closure of a finite field, the answer is "yes", but over $\mathbb{C}$ it's "no".

In this talk I will mention these and several other questions and say a little about the proofs and examples that answer a few of them. (Received January 28, 2014)