

## REAL OPEN SETS

## Why

In order to speak of the derivative of a function  $f:(a,b)\to \mathbf{R}$  at some point  $x_0\in \mathbf{R}$ , we took a limit of deviations from that point. In other words,

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## Definition

A subset  $U \subset \mathbf{R}^n$  is open if for every point  $x \in U$  there exists a real number  $\varepsilon > 0$  so that  $B(x, \varepsilon) \subset U$ .

<sup>&</sup>lt;sup>1</sup>Future editions will include.

