



Definition

Let $x \in \mathbf{R}^d$. The *open ball* centered at x (or around x) of radius $\delta > 0$ is the set

$$\{x' \in \mathbf{R}^d \mid d(x, x') < \delta\}$$

where $d : \mathbf{R}^d \times \mathbf{R}^d \rightarrow \mathbf{R}$ is the usual Euclidean distance.

Notation

We sometimes denote the open ball by $B(x, \delta)$ or $B_\delta(x)$

