

## REAL BALLS

## **Definition**

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

$$\left\{y \in \mathbf{R}^d \; \middle| \; d(x,y) < \delta \right\}$$

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

## Notation

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

