R^n
R^n
dis-
tan-
cia
métrica
R^n
$d:$
$R^n \times$
$R^n \to$
$[0, +\infty)$

$$d(\mathbf{x}, \mathbf{y}) := \sqrt{\sum_{i=1}^{n} (x_i - y_i)^2},$$

(1)

$$d(\mathbf{x}, \mathbf{y}) = \sum_{i=1}^{n} |x_i - y_i|$$

(2)
X
$d:$
$X \times$
$X \to$
R
d
métrica
so-
bre
X
$\forall x \forall y :$
$d(x, y) =$
$0 \Leftrightarrow$
$x \equiv$
y
$\forall x \forall y :$
$d(x, y) =$
$d(y, x)$
$\forall x \forall y \forall z :$
$d(x, z) \leq$
$d(x, y) +$
$d(x, z)$
d
X
(X, d)
es-
pa-
cio
métrico
de-
sigual-
dad
triagu-
lar
$|.| :$
$R \to$
R
R
$x, y \in$
R
$d(x, y) = |x - y|.$
(3)
R^n
d

$$d(\mathbf{x}, \mathbf{y}) := \sqrt{\sum_{i=1}^{n} (x_i - y_i)^2},$$

(4)
$\mathbf{x} =$
$(x_1, \ldots, x_n)$
$\mathbf{y} =$
$(y_1, \ldots, y_n)$
d
métrica
eu-
clidea
R^n
X

$$d(x, y) := \begin{cases} 1, & x \neq y \\ 0, & x = y \end{cases}$$

métrica
disc-
reta
X
$\mathcal{A}(X)$
$f :$
$X \to$
R
$(\mathcal{A}(X), d)$
$d(f, g) := \sup_{x \in X} |f(x) - g(x)|.$
(5)
$\mathcal{C}([0, 1])$

$r)$
R^2

(X, d)
$x \in$
X

$$B(x, r) = \begin{cases} \{x\}, & r < 1 \\ X, & r \geq 1 \end{cases}$$

$\tilde{}$n
n
(X, d)

$$E(x, r) = \begin{cases} \{x\}, & r = 0 \\ X - \{x\}, & r = 1 \\ \emptyset, & r \neq 0 r \neq 1 \end{cases}$$

(X, d)
$A \subset$
X
A

$$\delta(A) := \sup_{x,y \in A} d(x, y).$$