X
K
θ
$\|.\|:$
$X \to$
$\mathbf{R}$
$x, y \in$
X
$\alpha \in$
K
$\|x\| \geq$
0
$\|x\| =$
$0 \Leftrightarrow$
$x =$
θ
$\|\alpha x\| =$
$|\alpha|\|x\|$
$\|x+$
$y\| \leq$
$\|x\|+$
$\|y\|$
$\|.\|$
1
X
$(X, \|.\|)$
$\|.\|$
X

$$d(x, y) = \|x - y\|$$

d
θ
X
A
X
X
A
$spanA$
$span\emptyset =$
$\{\theta\}$
$(X, \|.\|)$
E
X
$\|.\|$
E
E
E
X
$(X, \|.\|)$
$x \in$
X
$r >$
0
x
r
$B(x, r)$

$$B(x, r) = \Big\{y \in X : \|x - y\| < r\Big\}.$$

(X, d)
$A \subseteq$
X
A
$\partial A, \overline{A}, A^o$
(X, d)
A
X
2
$\epsilon >$
0
A
X
ϵ
A
(X, d)
A
3
$(X, \|.\|)$
4
l^p
$1 \leq$
$p <$
∞
l^p
$\{a_n\}$
$\sum_{j=1}^{\infty} |a_n|^p <$
∞
$\|.\|$

$$\|\{a_n\}\| = (\sum_{j=1}^{\infty} |a_n|^p)^{\frac{1}{p}}.$$