1
$(X, \cdot)$
X
$\cdot :$
$X \to^{+}$
$\cup 0, x \mapsto$
x
$x >$
$0, \forall x \in$
X
$x =$
$0 x =$
0
$x =$
x
$\forall \in$
$\forall x \in$
X
$x + y \leq$
$x +$
y
$\forall x, y \in$
X .
X
2
$X =^{n}$
$x =$
$\sum_{i=1}^{n} x_i^{2\,1/2}$
$x \in$
X
??
$d(x, y) =$
$x - y$
X
X
d
X
$\forall \in$
$, x, y, z \in$
$X, then$
$is a norm on. Some trics pace is not normed space in general case.$
$x_1, \ldots, x_n$
$\prod_{i=1}^{n} x_i^{1/n} \leq$
$\frac{1}{n} \sum_{i=1}^{n} x_i.$
??
$(X, \cdot)$
X
$\forall p \in$
$[1, \infty)$
$\ell_p()$
$\ell_\infty()$
3
S
4
X
X
5
6
X
$C(X)$
$C(X)$
$\forall x \in$
X
$f, g \in$
$f(x) \neq$
$g(x)$
?
$[a, b]$
$C[a, b]^7$

Usually, we take =, definition needed. proof needed. it is partially ordered set in Bollobas book.