?

?

$|\cdot| : \to$

$$|a+ib| \mapsto \sqrt{a^2+b^2}$$

$a+ib \in$
k
$|\cdot| : k \to$
valuation
$|\alpha| = 0 \iff \alpha = 0$
$|\cdot| \subset$
$|\alpha\beta| = |\alpha||\beta|$
$|\alpha+\beta| \leq |\alpha| + |\beta|$
nonarchimedean
archimedean
$|\alpha+\beta| \leq \max(|\alpha|, |\beta|)$
$(1+i)$
(i)
$(3) \subset$

$$x3 = x(3) = 3^{-\nu_3(x)}$$

$363 = 3^{-2}$

?

equivalence
:
equivalent
1
$c \in (0,1)$
$|\cdot|_1 = |\cdot|_2^c$

equivalent
$|\cdot|_1$
$|\cdot|_2$
γ
$|\gamma|_1 < 1 and |\gamma|_2 > 1.$

$|\cdot|_i$
α
$|\alpha|_1 > 1 and |\alpha|_{i>1} < 1.$

$|\cdot|_i$
$\epsilon > 0$
α
$|\alpha - 1|_1 \leq 1 and |\alpha|_{\nu>1} \leq 1.$

$(|\cdot|_i, \alpha_i)$
$|\cdot|_i$
$\epsilon > 0$
α
$|\alpha - \alpha_i|_i < \epsilon.$

$|\cdot|_i$
$\prod |\alpha|_i^{\nu_i} = 1$

$k \hookrightarrow$
$V(k)$
i
$k \to$
k

$\alpha \mapsto (i_(\alpha))$

$V() = \prod$

k
$V(\alpha) =$
1
$V(\alpha) = V()$

$\mapsto$
$x_\in$
$x_= 1$
$c \leq$
x
k
$k_0 \subset$
k_s
q
q
s
k_0
q
q
1
s
k_0
M
$M()$
$\theta \in$
k
$M(\theta) =$
$M()$
θ
θ
$\alpha \in$
k
$\alpha \leq$
1
$\alpha <$
1
$/$
or-
der
N
$k_0 \subseteq$
$k =$
$/$
$N = (\#k_0)^{[k:k_0]}$

M
??
N
$k_=$
$\alpha \neq$
0
$/$
$|\infty$
$||\alpha||_= \frac{1}{N^\nu}$

$\nu =_($
$\alpha)$
$k =$
$||.$

$k =$
$||.$

M
??
??
$K/$
k_1
$K/k_1(z)$
z
$/k_1$
??
??
??
??
C, D
$CV() < M() \leq \max(1, DV())$

U
$x \in$
k
U
$||x||_= 1$
k_0
U