k
$P \in$
$k[x]$
P
$F[x]$
F/k
$false$
P
P
d
k
P
d
$false$
$P =$
$x^3 -$
$2 \in$
$[x]$
P
$(\sqrt[3]{2}, j)$
j
P
d
k
P
$d!$
$true$
P
d
k
F/k
d
P
$true$
$P =$
$x^3 -$
2
(j)
P
P
k
$k(\alpha)$
$k(\beta)$
P
k
$f, g :$
$k(\alpha) \to$
$k(\beta)$
$f(\alpha) =$
$g(\alpha) =$
β
$false$
$\star$
F
$x^4 -$
2
$x^4 ?2$
$x^4 -$
2
$\sqrt[4]{2}, \imath\sqrt[4]{2}, -\sqrt[4]{2}$
$-\imath\sqrt[4]{2}$
$\imath$
$-\imath$
$F =$
$(\imath, \sqrt[4]{2})$
EF
$x^4 -$
2
$true$
$\sqrt[4]{2}$
$x^4 -$
2
$E =$
$(\sqrt[4]{2})$
$[E :$
$] =$
4
E
$1, \sqrt[4]{2}, \sqrt{2}, (\sqrt[4]{2})^3$
F
$(\imath, \sqrt[4]{2})$
$1, \sqrt[4]{2}, \sqrt{2}, (\sqrt[4]{2})^3, \imath, \imath\sqrt[4]{2}, \imath\sqrt{2}, \imath(\sqrt[4]{2})^3$
F
t
$true$
$\sqrt[4]{2}, \imath\sqrt[4]{2} \in$
F
$\imath\sqrt[4]{2}/\sqrt[4]{2} =$
$\imath \in$
F
F
$(\imath)$
$[(\imath) :$
$] =$
2