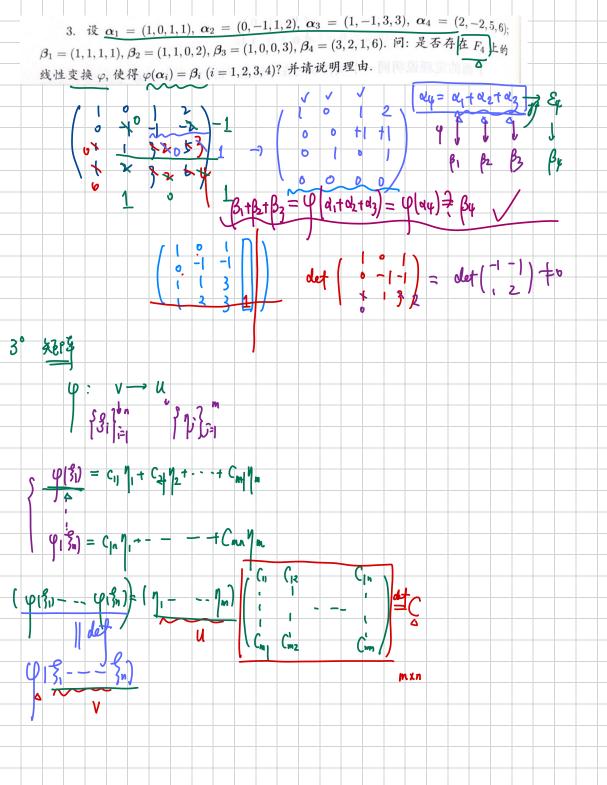
Notes 2024. 12.5 Linear mapping Chapter 4 Recall: 4th V 31. -- 3n V ~ 23 3 31570 . 140. ∠(v,u) v→u Fg i v3 mm fs (Hom(v,u)) α = c,3,+--+c,5,= (3,+--3,n) <(リ) V上所な体性を使(H=(V)) お月後ャスる 1 Homomorphism 18/2 Tral: ·1-1 · DATO · 保持+, 都不 S/° EN & Fn. 2° L(V, u) + 2223 Vactor space. 1272 Fine () V - 14, 01 - (W) ψ. A→B, αH(d) ~ "保净+,都不 · Imp = ((A) = { ((d) | α ∈ V } [\$ 9(0)= 9(0+0) = 2910) it for: Imp = U

#12 # (α)= (P(β) #> α=β $\sim \gamma (\alpha - \beta) = 0 \Rightarrow \alpha - \beta \in \ker \varphi \Rightarrow \exists \gamma \in \ker \varphi, \alpha = \beta + \gamma$ · | x+ Kery = } x+y y < Kery } $\Rightarrow \varphi[\alpha + k_{\alpha}\varphi] = \varphi[\alpha]$ a+ Kery = B+ Kery > P(a)=P(B) > a-B = Kerp V/kery:= | X+ Kery | dEV { · + / (a+ Kerp) + (3+ Kerp) = (a+B)+ Kerp · 824. c(x+ Kerg) = cx+ kerg V/tenp te 12 x 10 / 22 # 7 13 th / 2 12 10 Well-defined 62×10. 1/62/2012/18/18/ dit Kno = of kent (> di-de kent B1 + Keng = B+Keng (3) B1-BEKENG N+β1+Kenp = (N+β1)

Note:
$$k_{\mu\nu} = k_{\mu} = k_{\mu}$$



$$\begin{array}{c} = (\eta_{1} - \eta_{m}) \ C \ C \ C - C \ D \\ = (\eta_{1} - \eta_{m}) \ C \ C \ D \\ = (\eta_{1} - \eta_{m}) \ D \\ = (\eta_{1} - \eta_{1}) \ D \\ = (\eta_{1} - \eta_{$$

