

$$J_{\lambda, m} = \begin{pmatrix} \lambda & & & 0 \\ & \lambda & & \\ & & \ddots & \\ 0 & & & \lambda \end{pmatrix}$$

f polinom

$$f(J_{\lambda, m}) = \begin{pmatrix} f(\lambda) & & & \\ f'(\lambda) & & & \\ f''(\lambda) & & & \\ \vdots & & & \\ f^{(m-1)}(\lambda) & & & \end{pmatrix}$$

HF $e^{J_{\lambda, m}}$ $e^x \exp. f v.$

e^x hatványssorozat (összeírás, majd összege).

v_1, \dots, v_n rangja diu $\langle v_1, \dots, v_n \rangle$.

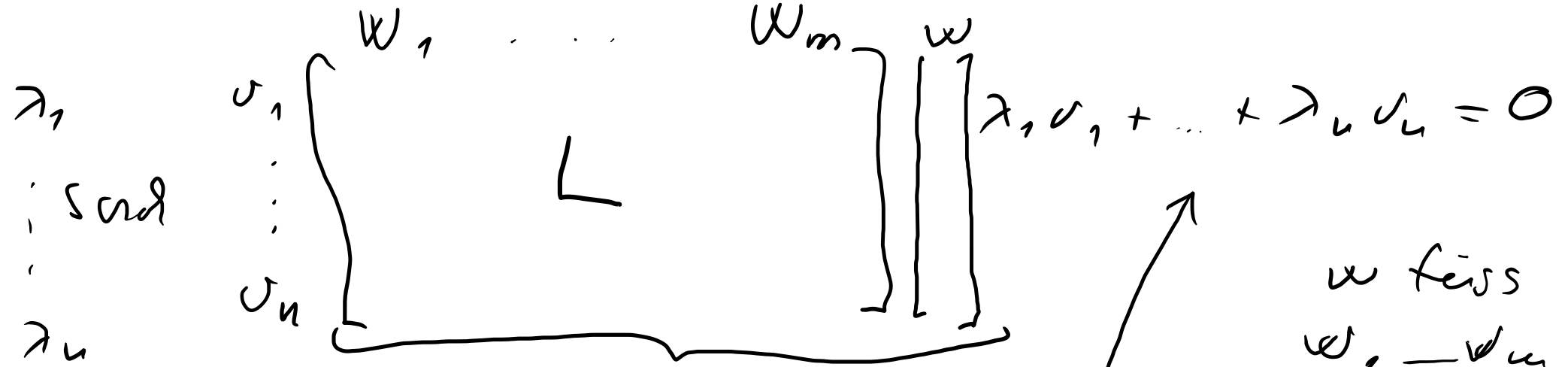
ATA max kaus dard \textcircled{F} van
 v_1, \dots, v_n löfötl.

\rightarrow Pent : max \textcircled{F} zinkeluat $\{v_1, \dots, v_n\}$ -ben
 $\Rightarrow \textcircled{B} \subset \langle v_1, \dots, v_n \rangle$.

Gauss-diu : vertepesed väina.

r $\left[\quad \quad \quad \right] = ?$ overluprang
||
[rang

orthogonal



w füss
 w_1, \dots, w_m - fül.

$[\lambda_1 \dots \lambda_n]$
 \parallel
 s

$[L]$

$= \begin{bmatrix} 0 \\ 0 \\ \vdots \\ 0 \end{bmatrix}$

$w = \mu_1 w_1 + \dots + \mu_n w_n$

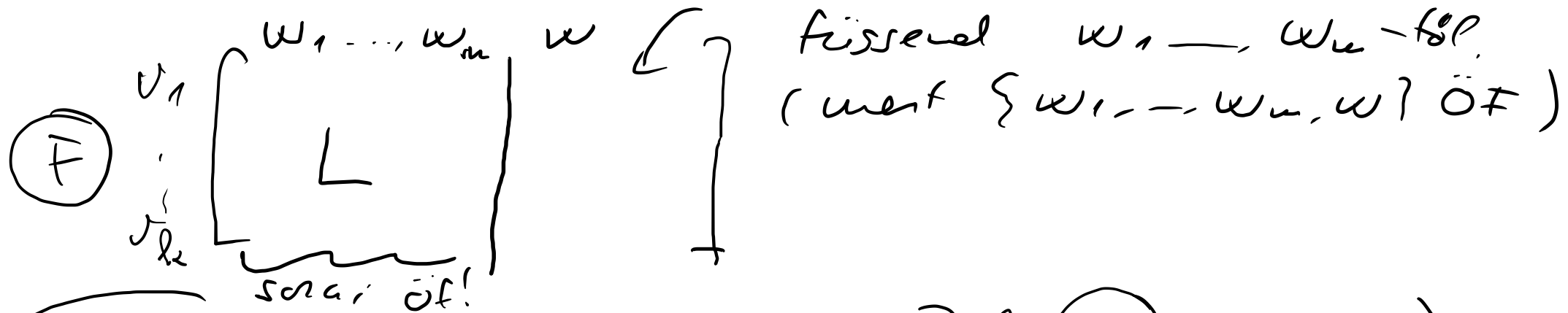
$[L]$

$\begin{bmatrix} \mu_1 \\ \vdots \\ \mu_n \end{bmatrix} \parallel w.$

$\parallel t$

$(s \parallel L) t = s (L \parallel t)$
 $\parallel 0$

$\parallel s w.$

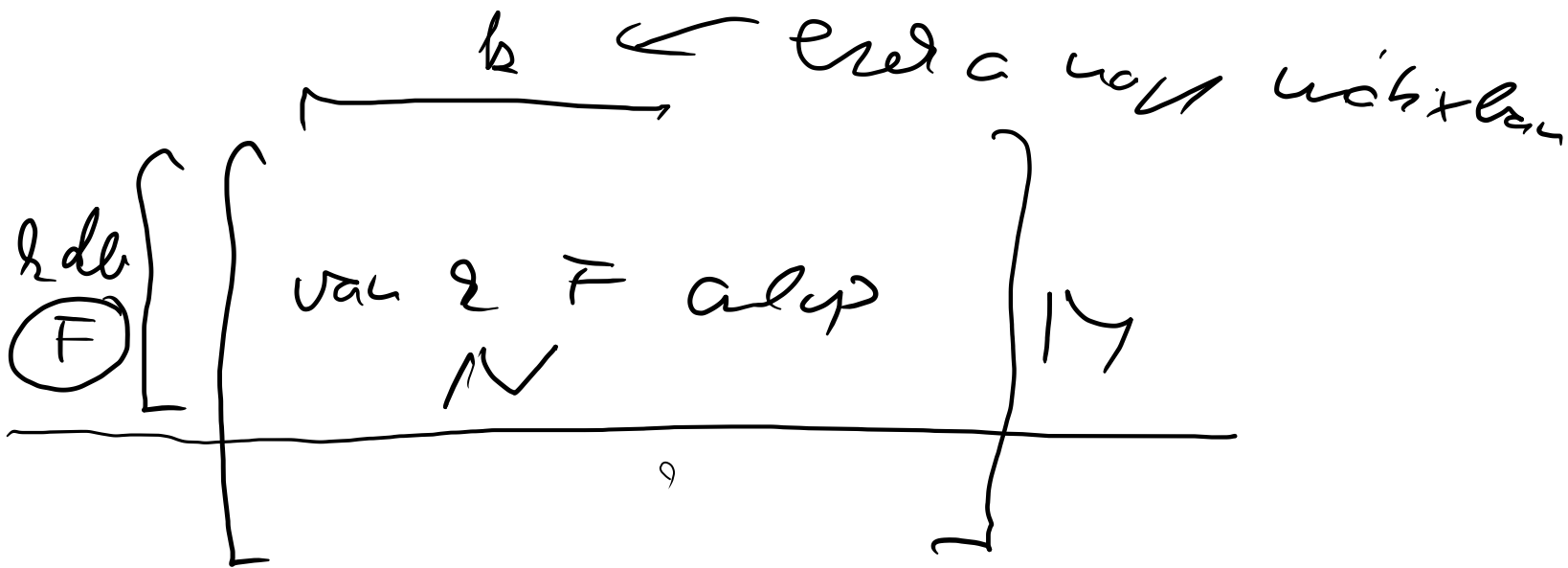


\Rightarrow opt-beraus $\geq k$. (astat $\exists k$ (F) outpöböl)

Biz. Tfh wenn $\max (F)$ outpöböl
 $w_1, \dots, w_n, w < k$

L snai öf, wert T^u -ber valuat
 $k > w$ \uparrow w -dim.

\hookrightarrow elötö \Rightarrow ejét wölix snai öf
 \checkmark



Satzung k

$[v]$
 \uparrow ist
 v raus
 möglich

$d_1 \begin{bmatrix} A(l_1) & \dots & A(l_n) \\ \vdots & & \vdots \\ d_m \begin{bmatrix} A(l_1) \\ \vdots \\ A(l_n) \end{bmatrix} \end{bmatrix} = (A)_{d/k}$

\swarrow Dimension =
 $r([A(l_1)], \dots, [A(l_n)])$
 $r(A(l_1), \dots, A(l_n)) =$

dim. total bis.

$d_m < A(l_1), \dots, A(l_n) >$
 \nearrow

Gen. zu
 $(m(A) - \text{bau.})$