$$U \xrightarrow[\text{stet}]{\eta^{\cdot}} \mathbb{K}^n$$

$$U \underset{n}{\blacktriangleright} \mathbb{K}^n = \frac{U \xrightarrow{1} \mathbb{K} \text{ n-diff+}}{{}_{n}1 + \eta^{\cdot}\, {}_{\cdot}1 = 0 = {}_{n}1 + \sum_j \eta^{\cdot j}\, {}_{j}1} \text{ hom Lsg-Raum}$$

$$U \underset{n}{\blacktriangleright} \mathbb{K} \sqsubset U \underset{n}{\triangleright} \mathbb{K} \text{ lin UR}$$

$$U \underset{n}{\blacktriangleright} \mathbb{K} \ni \dot{1} \Rightarrow 0 = {}_{n}\dot{1} + \eta^{\cdot}\, {}_{\cdot}\dot{1} \Rightarrow {}_{n}\underline{1 + 1'} + \eta^{\cdot}\, {}_{\cdot}\underline{1 + 1'} = \overbrace{{}_{n}1 + {}_{n}1'} + \overbrace{\eta^{\cdot}\, {}_{\cdot}1 + \eta^{\cdot}\, {}_{\cdot}1'}$$

$$= \overbrace{{}_{n}1 + \eta^{\cdot}\, {}_{\cdot}1} + \overbrace{{}_{n}1' + \eta^{\cdot}\, {}_{\cdot}1'} = 0 + 0 = 0 \Rightarrow 1 + 1' \in U \underset{n}{\blacktriangleright} \mathbb{K}$$

$$a \in U \underset{\text{Lin}}{\overset{\text{Pic}}{\Rightarrow}} \bigvee U \xrightarrow[\text{hom Lsg}]{\begin{bmatrix} \mathbb{1}^0 \\ \mathbb{1}^{n-1} \end{bmatrix}} \mathbb{K}^n$$

$$ {}^{a}_{i}\mathbb{1}^{j} = {}_{i}\mathbb{1}^{j} \text{ lin unabh}$$

$$\text{Wronski det} \begin{array}{c|c} {}^{a}_{0}\mathbb{1}^{0} & {}^{a}_{0}\mathbb{1}^{n-1} \\ \hline {}^{a}_{n-1}\mathbb{1}^{0} & {}^{a}_{n-1}\mathbb{1}^{n-1} \end{array} \neq 0$$

$$\mathbb{1}^{0} \cdots \mathbb{1}^{n\text{-}1} \underset{\text{basic}}{\in} U \underset{n}{\blacktriangleright} \mathbb{K}$$

$$\dim_{\mathbb{K}} U \underset{n}{\blacktriangleright} \mathbb{K} = n$$

$$\mathbb{1}^{0} \cdots \mathbb{1}^{n\text{-}1} \ \text{free}$$

$$_{j}\rceil \in \mathbb{K} \wedge 0 = \sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil \Rightarrow 0 = {}^{a}_{i}\underline{\sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil} = \sum_{j}^{n} {}^{a}_{i-}\mathbb{1}^{j} {}_{j}\rceil \Rightarrow {}_{j}\rceil = 0$$

$$\mathbb{1}^{0} \cdots \mathbb{1}^{n\text{-}1} \ \text{hull}$$

$$\lrcorner \in U \underset{n}{\blacktriangleright} \mathbb{K} \Rightarrow {}^{a}_{i-}\lrcorner = \sum_{j}^{n} {}_{i}\mathbb{1}^{j} {}_{j}\rceil = \sum_{j}^{n} {}^{a}_{i-}\mathbb{1}^{j} {}_{j}\rceil = {}^{a}_{i}\underline{\sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil}$$

$$\Rightarrow \lrcorner - \sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil \in U \underset{n}{\blacktriangleright} \mathbb{K} \wedge {}^{a}_{i}\underline{\lrcorner - \sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil} = 0 \underset{\text{eind}}{\Rightarrow} \lrcorner - \sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil = 0 \Rightarrow \lrcorner = \sum_{j}^{n} \mathbb{1}^{j} {}_{j}\rceil$$

$$U \underset{n}{\blacktriangleright} \mathbb{K}^{n} \ni {}_{\cdot}\mathbb{1}^{\cdot} {}_{\cdot}c = {}_{\cdot}\mathbb{1}^{j} {}_{j}\rceil = \begin{bmatrix} {}_{1}\mathbb{1}^{\cdot} {}_{\cdot}\rceil \\ {}_{n}\mathbb{1}^{\cdot} {}_{\cdot}\rceil \end{bmatrix} = \begin{bmatrix} {}_{1}\mathbb{1}^{j} {}_{j}\rceil \\ {}_{n}\mathbb{1}^{j} {}_{j}\rceil \end{bmatrix} \ \text{gen sol}$$