$$\text{zush/weg-zush } U \subset \mathbb{R}^n: \quad U \xrightarrow[\text{diff}]{\text{ɿ}} \mathbb{R} \begin{cases} \underline{\text{ɿ}} = 0 \\ \nabla \text{ɿ} = 0 \end{cases} \quad \Longrightarrow \text{ɿ} = \text{ const}$$

U konv/Zush-Argument

$$\text{conv } C \subset \mathbb{R}^n \begin{cases} C \xrightarrow[\text{diff}]{\text{ɿ}} \mathbb{R}^m \\ C \xrightarrow[\text{bes}]{\underline{\text{ɿ}}} \mathbb{R}^{m \times n} \end{cases} \quad \Longrightarrow \text{ɿ u-stet}$$

$$\text{ʡ} = \begin{bmatrix} {}_1\text{ʡ} \\ {}_m\text{ʡ} \end{bmatrix} \text{ diff} \Leftrightarrow \begin{cases} \bigwedge_i {}_i\text{ʡ} \text{ diff} \\ {}^v\underline{\text{ʡ}} = \begin{bmatrix} {}^v_1\underline{\text{ʡ}} \\ {}^v_m\underline{\text{ʡ}} \end{bmatrix} \end{cases} \quad \text{max-Norm on } \mathbb{R}^n$$

$$\mathbb{R}^n \supset U \xrightarrow[\infty \text{ diff}]{\text{ɿ}} \mathbb{R} \Longrightarrow \bigwedge_{\pi}^{\mathcal{S}_k} \partial_{i_1} \cdots \partial_{i_k} \text{ɿ} = \partial_{i_{\pi 1}} \cdots \partial_{i_{\pi k}} \text{ɿ}$$

$$\begin{cases} \mathbb{R} \xrightarrow[\text{diff}]{g} \mathbb{R} \\ {}^0\underline{g} = 0 \end{cases} \quad \Longrightarrow \begin{cases} \mathbb{R}^n \xrightarrow{\text{ɿ}} \mathbb{R} \\ {}^v\text{ɿ} = g\left(\overline{v}\right) \end{cases} \quad \text{diff in } 0$$

$$\mathbb{R}^{n+} \supset U \xrightarrow[\text{diff}]{\text{ɿ}} \mathbb{R} \Longrightarrow \begin{cases} {}^2\overline{{}^v\underline{\text{ɿ}}} = \sup_{\mathbb{S}^n} {}^x\underline{\text{ɿ}}|v \\ \text{sup angenommen welches } v \in \mathbb{S}^n / \text{ eind?} \end{cases}$$

$$\mathbb{R}^2 \xrightarrow[\text{bes}]{g} \mathbb{R} \Longrightarrow {}^{x:y}\text{ɿ} = xy\, {}^{x:y}g \text{ tot diff}_{0:0} / \nabla^{0:0}\text{ɿ}$$