

# Übung 3

$$\begin{aligned}
 & \left\{ \begin{pmatrix} \sigma(\sigma(x_1, \alpha), \sigma(\gamma(x_3), x_3)) \\ \sigma(\sigma(\gamma(x_2), \alpha), \sigma(x_2, x_3)) \end{pmatrix} \right\} \\
 \xRightarrow{\text{Dek.}} & \left\{ \begin{pmatrix} \sigma(x_1, \alpha) \\ \sigma(\gamma(x_2), \alpha) \end{pmatrix}, \begin{pmatrix} \sigma(\gamma(x_3), x_3) \\ \sigma(x_2, x_3) \end{pmatrix} \right\} \\
 \xRightarrow{\text{Dek.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} \alpha \\ \alpha \end{pmatrix}, \begin{pmatrix} \sigma(\gamma(x_3), x_3) \\ \sigma(x_2, x_3) \end{pmatrix} \right\} \\
 \xRightarrow{\text{Dek.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} \alpha \\ \alpha \end{pmatrix}, \begin{pmatrix} \gamma(x_3) \\ x_2 \end{pmatrix}, \begin{pmatrix} x_3 \\ x_3 \end{pmatrix} \right\} \\
 \xRightarrow{\text{El.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} \alpha \\ \alpha \end{pmatrix}, \begin{pmatrix} \gamma(x_3) \\ x_2 \end{pmatrix} \right\} \\
 \xRightarrow{\text{Dek.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} \gamma(x_3) \\ x_2 \end{pmatrix} \right\}
 \end{aligned}$$

## Übung 3

$$\begin{aligned} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} \gamma(x_3) \\ x_2 \end{pmatrix} \right\} \\ \xRightarrow{\text{Vert.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(x_2) \end{pmatrix}, \begin{pmatrix} x_2 \\ \gamma(x_3) \end{pmatrix} \right\} \\ \xRightarrow{\text{Sub.}} & \left\{ \begin{pmatrix} x_1 \\ \gamma(\gamma(x_3)) \end{pmatrix}, \begin{pmatrix} x_2 \\ \gamma(x_3) \end{pmatrix} \right\} \end{aligned}$$

allgemeinster Unifikator:

$$x_1 \mapsto \gamma(\gamma(x_3))$$

$$x_2 \mapsto \gamma(x_3)$$

$$x_3 \mapsto x_3$$

## Übung 3

weitere Unifikatoren:

$$x_1 \mapsto \gamma(\gamma(\alpha))$$

$$x_2 \mapsto \gamma(\alpha)$$

$$x_3 \mapsto \alpha$$

$$x_1 \mapsto \gamma(\gamma(\gamma(\alpha)))$$

$$x_2 \mapsto \gamma(\gamma(\alpha))$$

$$x_3 \mapsto \gamma(\alpha)$$

Occurs-Check schlägt fehl bei:

$$t_1 = x_1$$

$$t_2 = \gamma(x_1)$$