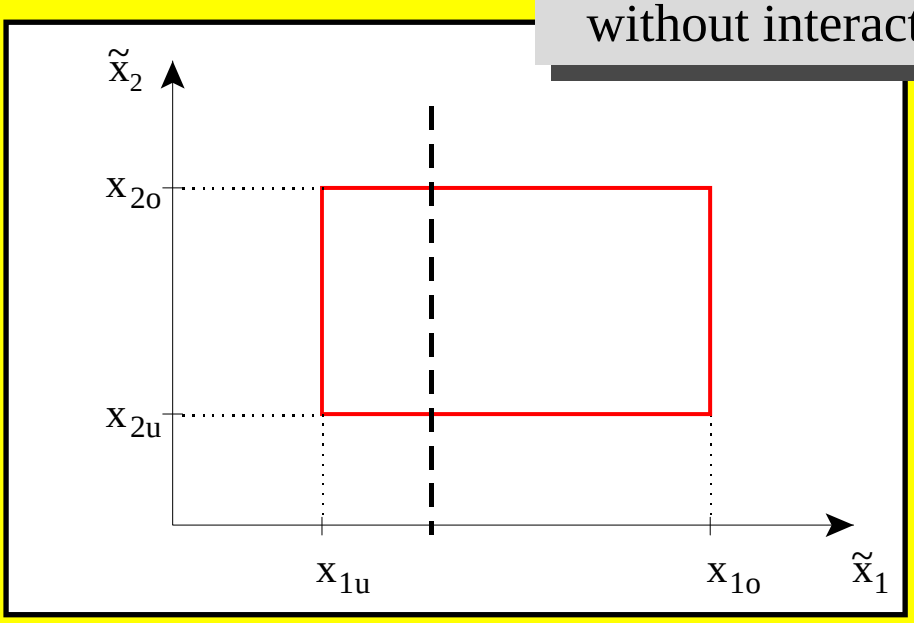
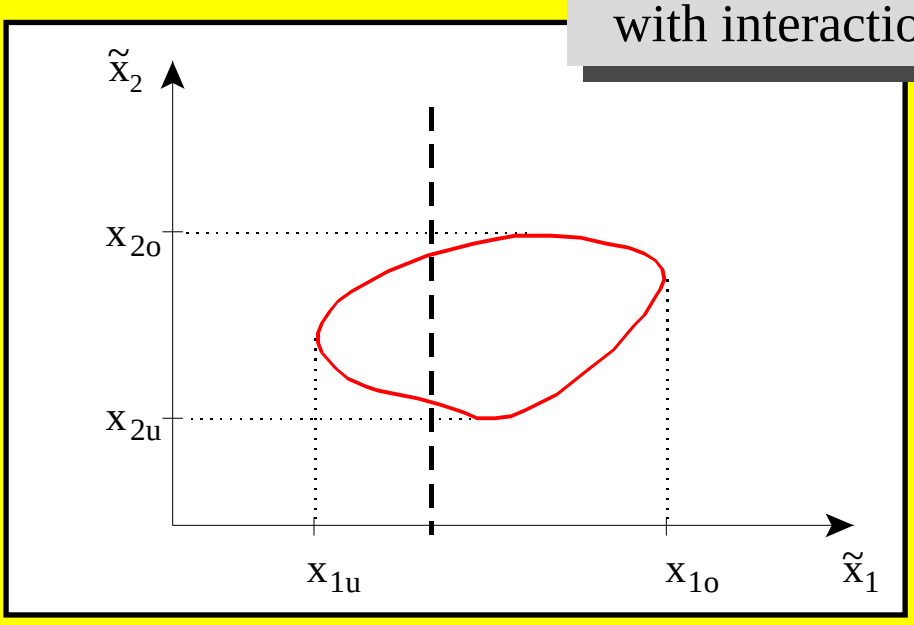
Interaction of fuzzy values

without interaction

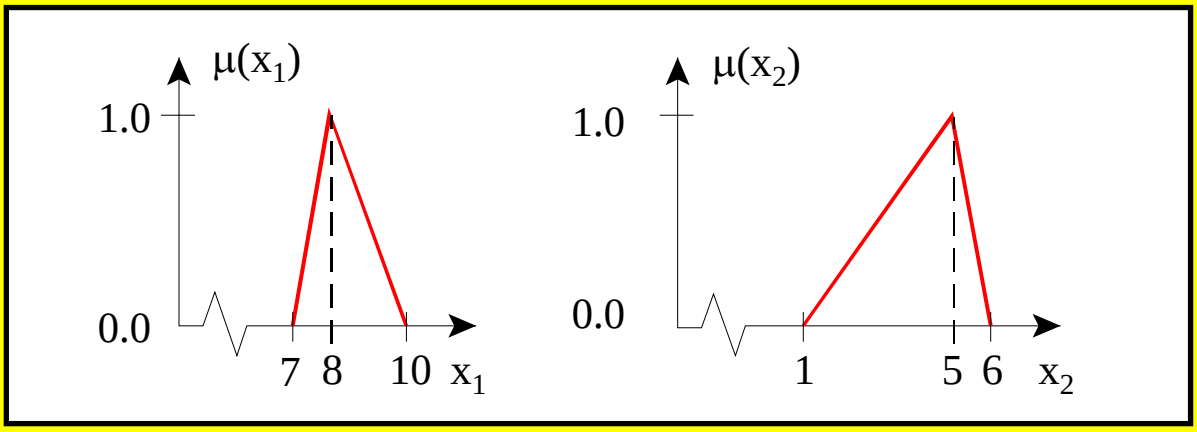


with interaction



Direct Interaction of fuzzy values - example

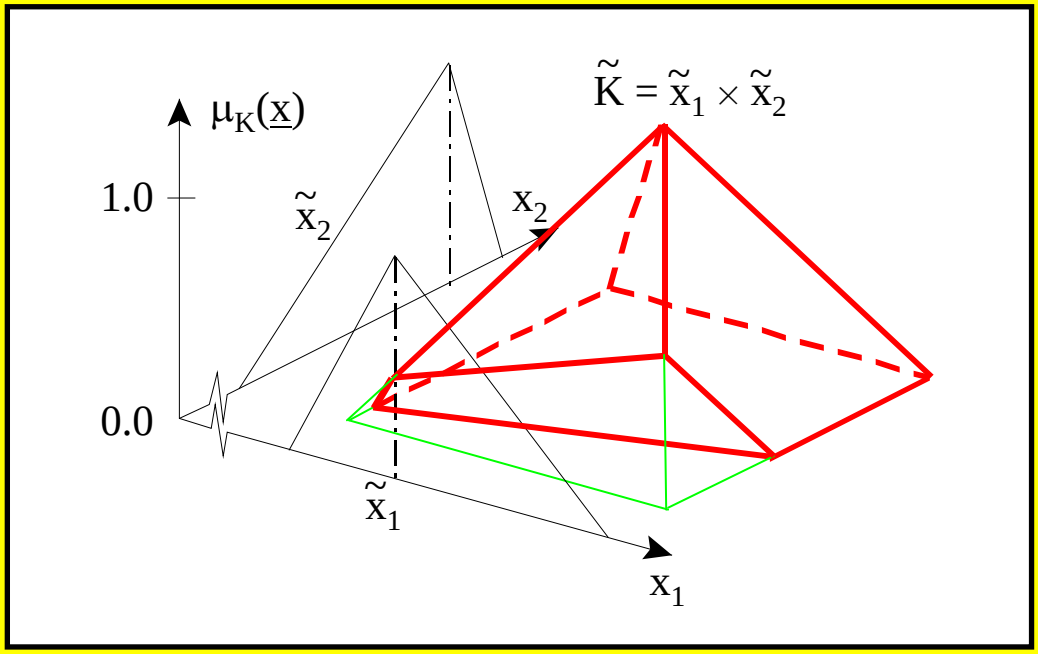
fuzzy input values $\tilde{x}_1$ and $\tilde{x}_2$



constraint ⇒ a priori interaction

$$\tilde{x}_1 - 2 \cdot \tilde{x}_2 \leq 4$$

cartesian product with a priori interaction

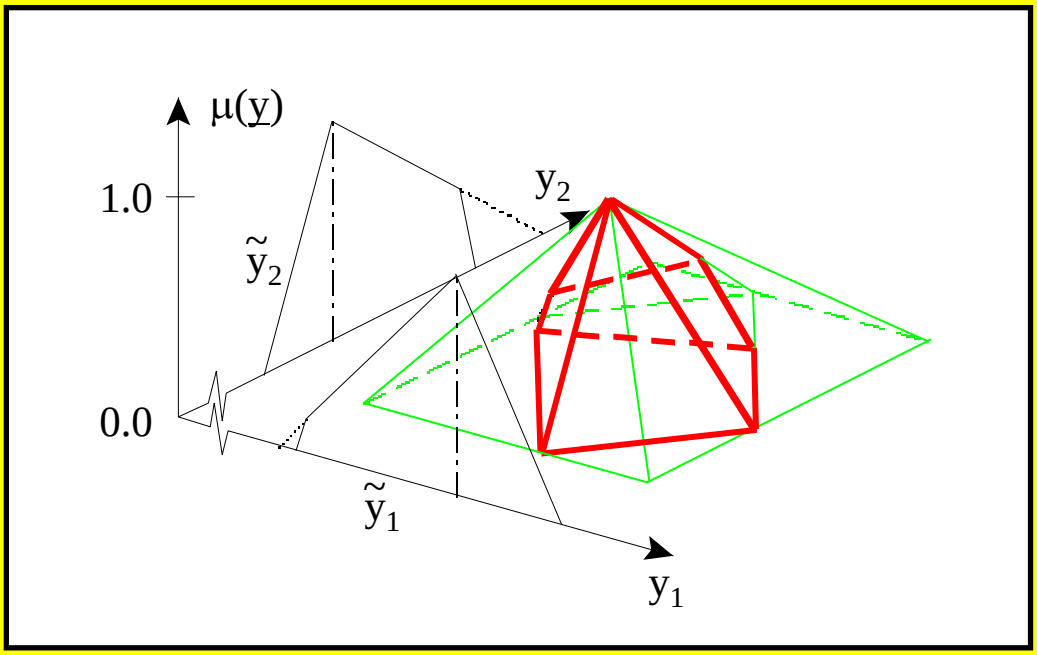


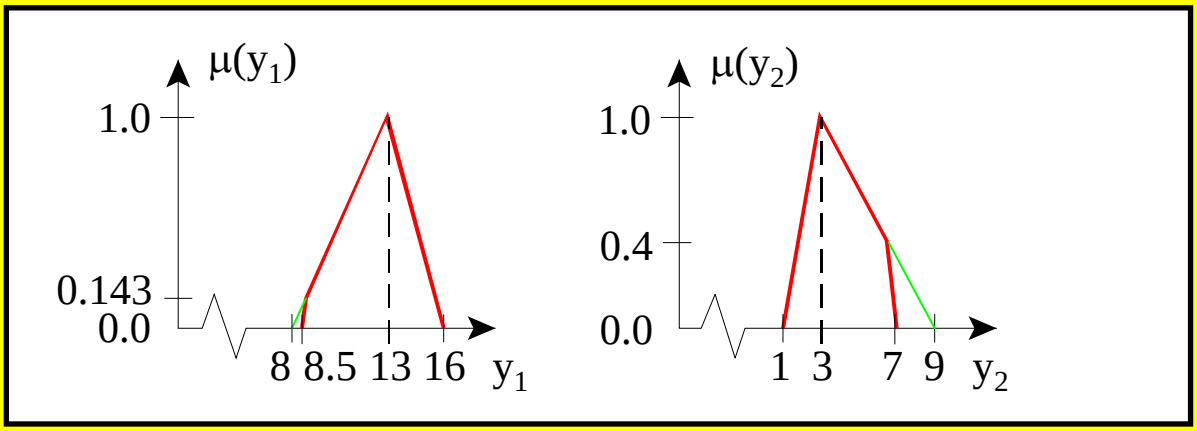
Indirect Interaction of fuzzy values - example

mapping operator

$$z = f(x_1; x_2) = 2 \cdot y_1 + y_2 \quad \text{mit:} \quad y_1 = x_1 + x_2 \quad \text{und} \quad y_2 = x_1 - x_2$$

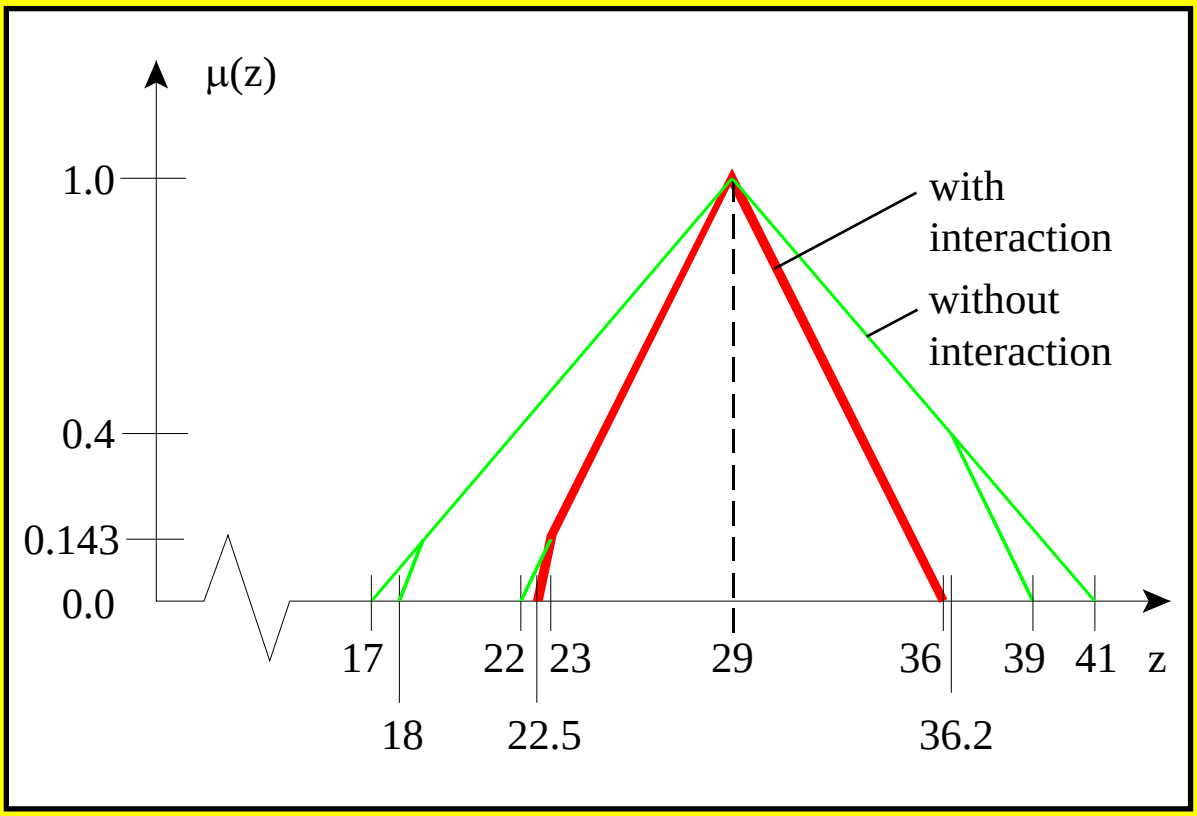
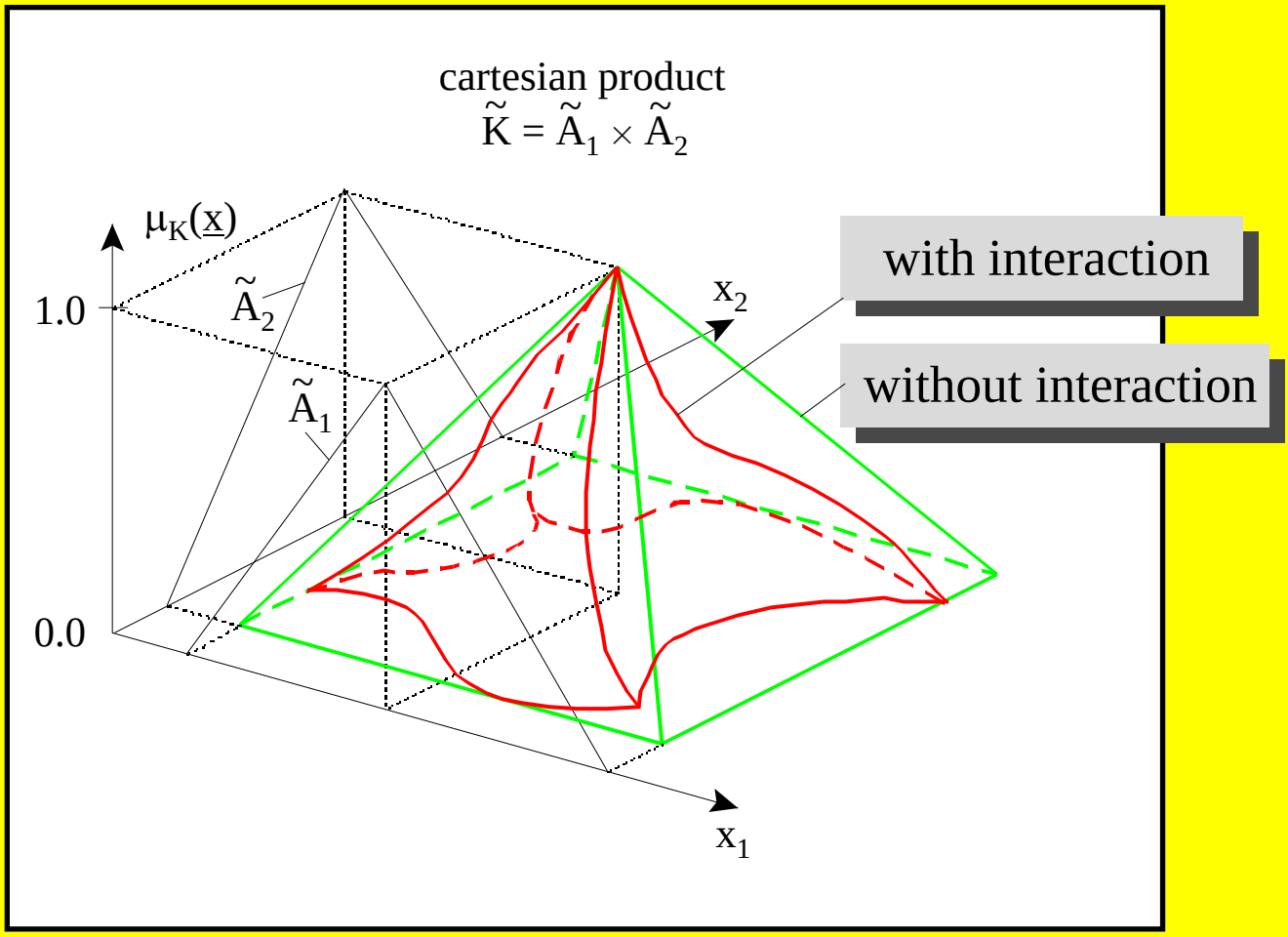
fuzzy intermediate results $\tilde{y}_1$ and $\tilde{y}_2$ with additional interaction inside the mapping





Interaction of fuzzy values - example

fuzzy result $\tilde{z}$



Interaction of fuzzy values