

8.

$$y = \alpha + \beta x$$

Wissen:

$$\bar{y} = \alpha + \beta \bar{x}$$

$$s_y^2 = \beta^2 s_x^2$$

$$z = \frac{x - \bar{x}}{s_x} = \frac{x}{s_x} - \frac{\bar{x}}{s_x}$$

also: α ist hier $-\frac{\bar{x}}{s_x}$

und β ist hier $\frac{1}{s_x}$.

was ist dann $\bar{z}$?

$$\bar{z} = \alpha + \beta \bar{x}$$

$$\bar{z} = -\frac{\bar{x}}{s_x} + \frac{1}{s_x} \bar{x} = -\frac{\bar{x}}{s_x} + \frac{\bar{x}}{s_x} = \underline{\underline{0}}$$

was ist dann s_z^2 ?

$$s_z^2 = \beta^2 s_x^2$$

$$s_z^2 = \left(\frac{1}{s_x}\right)^2 s_x^2 = \frac{s_x^2}{s_x^2} = \underline{\underline{1}}$$