Abschließender Test zu Beschreibende Statistik

36_03_A_002

$\bar{x} = 25$, $n = 11$

$4 * < 22$, $3 * 22$, $4 * > 22$ $\Rightarrow$ $x_{\frac{1}{2}} = 22$

Ersetze $x_k = 43$ durch $x_\ell = 16$

$\Rightarrow$ $5 * < 22$, $3 * 22$, $3 * > 22$ $\Rightarrow$ $y_{\frac{1}{2}} = 22$

$$\bar{y} = \frac{11 \cdot 25 - 43 + 16}{11} = 22.5$$

36_03_C_003

$n = 100$

$x_{mod} = 37$, $x_{\frac{1}{2}} = \frac{1}{2}\left(x_{50} + x_{51}\right) = \frac{1}{2}\left(36 + 37\right) = 36,5$

$x_{0.25} = \frac{1}{2}\left(x_{25} + x_{26}\right) = \frac{1}{2}\left(34 + 34\right) = 34$

$x_{mod} + x_{\frac{1}{2}} + x_{0.25} = 107,5$

36_03_A_001

$n = 1000$, $\bar{x} = \frac{200 \cdot 8 + 800 \cdot 4}{1000} = 4,8$

36_04_B_002

$\bar{x} = 40$, $s = 5$

$S_k = \{ i \mid |x_i - 40| < \underbrace{15}_{k \cdot s} \}$ $\Rightarrow$ $k = \frac{15}{s} = 3$

$$\frac{N(S_k)}{n} > 1 - \frac{1}{k^2} = 1 - \frac{1}{9} = 0,89$$

36_06_B_001

Streudiagramm:

x: Bodenfeuchtigkeit

y: Ernte ertrag