

DAN+WJ1 Test 2

$$1) \bar{x} = \frac{1}{6} (30 + 42 + 40 + 34 + 48 + 50) = \frac{122}{3} = 40,667$$

$$n=6 \\ \sigma=4,00$$

$$\bar{x} - 2,576 \frac{\sigma}{\sqrt{n}} < \mu < \bar{x} + 2,576 \frac{\sigma}{\sqrt{n}}$$

2,576 bei $C_{0,99}$

$$40,667 - 2,576 \frac{4}{\sqrt{6}} < \mu < 40,667 + 2,576 \frac{4}{\sqrt{6}}$$

$$36,460 \leq \mu \leq 44,874 \Rightarrow C_{1,99}$$

$$K = \pm 4,207$$

$$2) n=100 \quad (\text{Anz. Proben})$$

$$\bar{x} = 212,3 \quad (\text{emp. Mittelwert})$$

$$\sigma^2 = 0,25 \quad (\text{Varianz})$$

$$212,3 - 1,645 \frac{\sqrt{0,25}}{\sqrt{100}} \leq \mu \leq 212,3 + 1,645 \frac{\sqrt{0,25}}{\sqrt{100}}$$

$$212,218 \leq \mu \leq 212,382$$

$$K = \pm 0,082$$

$$3) s^2 = \frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2$$

$$n=4, \bar{x} =$$