

Zur STIRLING'schen Formel

$$\ln N! \approx N \ln N - N$$

$$\ln M = 2,302585 \cdot \log M$$

$$\log 10! = 6,559763$$

$$\ln 10! = 15,104411$$

$$\ln 10 = 2,302585$$

$$10 \ln 10 = 23,02585$$

$$10 \ln 10 - 10 = 13,02585$$

$$\sim \frac{2}{15} = 0,13$$

$$\log 20! = 18,386125$$

$$\ln 20! = 42,3356$$

$$\ln 20 = 2,9957$$

$$20 \ln 20 = 59,914$$

$$20 \ln 20 - 20 = 39,914$$

$$\sim \frac{2}{42} = 0,048$$

$$\log 50! = 64,483075$$

$$\ln 50! = 148,47776$$

$$\ln 50 = 3,9120$$

$$50 \ln 50 = 195,6$$

$$50 \ln 50 - 50 = 145,6$$

$$\sim \frac{3}{148} = 0,020$$