

Der Logarithmus - Umkehrung d. Potenziers

Aufgabe 1

$$\begin{aligned} \text{a)} \quad & \log(4) + \log(25) \\ &= \log(4 \cdot 25) \\ &= \log(100) \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \text{1. Logarithmengesetz (LG)}$$

$$\begin{aligned} \text{b)} \quad & \log(2500) - 2 \cdot \log(5) \\ &= \log(2500) - \log(5^2) \\ &= \log\left(\frac{2500}{25}\right) \\ &= \log(100) \end{aligned} \quad \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \text{3. LG}$$

$$\begin{aligned} \text{c)} \quad & 4 \cdot \log(5) + \log(2^4) \\ &= \log(5^4) + \log(2^4) \\ &= \log(5^4 \cdot 2^4) \\ &= \log((5 \cdot 2)^4) \\ &= 4 \cdot \log(10) \end{aligned} \quad \left. \begin{array}{l} \\ \\ \\ \\ \end{array} \right\} \begin{array}{l} \text{3. LG} \\ \text{1. LG} \\ \text{Potenzgesetz} \\ \text{3. LG} \end{array}$$