$$y = \log_a(c \cdot a^x)$$

$$= \log_a(c) + \log_a(a^x)$$

$$= \log_a(c) + a \cdot x \quad \text{(von Form } y = m \cdot x + c\text{)} \qquad \square$$

$$\log_a(y) = \log_a(c \cdot x^a)$$

$$\Rightarrow \log_a(y) = \log_a c + \log_a x^a$$

$$\Rightarrow \log_a(y) = \log_a c + a \cdot \log_a x$$

(von Form $y = m \cdot x + c$) $\square$