

$$\log_{\text{底}1} \text{幂}1 \cdot \log_{\text{幂}1} \text{幂}2 = \frac{\log_{\text{任意底}} \cancel{\text{幂}1}}{\log_{\text{任意底}} \text{底}1} \cdot \frac{\log_{\text{任意底}} \text{幂}2}{\log_{\text{任意底}} \cancel{\text{幂}1}}$$

$$= \frac{\log_{\text{任意底}} \text{幂}2}{\log_{\text{任意底}} \text{底}1}$$

$$= \log_{\text{底}1} \text{幂}2 \quad \leftarrow \quad \text{即 } \log_a b \cdot \log_b C = \log_a C$$

你可以这样记忆: $\log_a \cancel{b} \cdot \log_{\cancel{b}} C = \log_a C$