

Logaritmi

$$1. \log_a(x_1 \cdot x_2) = \log_a x_1 + \log_a x_2 \quad (a > 0, a \neq 1, x_1 > 0, x_2 > 0).$$

$$2. \log_a \frac{x_1}{x_2} = \log_a x_1 - \log_a x_2 \quad (a > 0, a \neq 1, x_1 > 0, x_2 > 0).$$

$$3. \log_a b = \frac{\log_c b}{\log_c a} \quad (a > 0, a \neq 1, c > 0).$$

$$4. \log_a b = \frac{1}{\log_b a} \quad (a > 0, a \neq 1, b > 0, b \neq 1).$$

$$5. \log_a(x^k) = k \log_a x \quad (a > 0, a \neq 1, x > 0, k \in \mathbb{R}).$$

$$6. \log_{a^k} x = \frac{1}{k} \log_a x \quad (a > 0, a \neq 1, x > 0, k \neq 0).$$