

Logarithm Properties

Product Rule

Quotient Rule

Power Rule

Change of Base Formula

Examples:

$$1) \log_b(7b)$$

$$2) \log_5\left(\frac{\sqrt{x}}{25}\right)$$

$$3) \ln\left(\frac{x^3\sqrt{x^2+1}}{(x+1)^4(x-1)}\right)$$

Examples:

$$4) \frac{1}{3}\log(x+9) + 4\log x$$

$$5) \log x + \log(x^2 - 1) - \log 7 - \log(x + 2)$$

$$6) \log_5 13$$