

Common logarithm: $\log x$ means $\log_{10} x$

Natural logarithm: $\ln x$ means $\log_e x$

Exponential Form: $b^x = a$

Logarithmic Form: $\log_b a = x$

Product Property: $\log_b uv = \log_b u + \log_b v$

Quotient Property: $\log_b (u/v) = \log_b u - \log_b v$

Power Property: $\log_b m^n = n \log_b m$

Inverse Properties: 1. $\log_b b^x = x$

2. $b^{\log_b x} = x$

One to One Properties: 1. If $\log_b a = \log_b x$, then $a = x$

2. If $b^a = b^x$, then $a = x$

Graphing: exponential curves graphing form is $y = a(b)^{x-h} + k$ where $y=k$ is the horiz. asymptote

logarithmic curves graphing form is $y = a \log_b (x-h) + k$ where $x=h$ is the vert. asymptote