Finding the Exact Value of a Logarithmic Expression

Logarithmic Form   Exponential Form

$$\log_b x = y \longrightarrow x = b^y$$

$$\log_b x = y$$

Convert logarithmic equation to exponential equation.

Solve the exponential equation for y.

Logarithmic Form   Exponential Form

$$\log_b x = y \longrightarrow x = b^y$$

$$\log_5 125 = y$$

$$\log_5 125 = 3$$

Convert logarithmic equation to exponential equation.

Solve the exponential equation for y.

Find the exact values of the following logarithmic expressions.

$$\log_2 16 = y \qquad \log_3 27 = y$$

Find the exact values of the following logarithmic expressions.

$$\log_7 1 = y \qquad \log_{\frac{1}{3}} 9 = y$$

Logarithmic Form   Exponential Form

$$\log_b x = y \longrightarrow x = b^y$$

$$\log_b x = y$$

Convert logarithmic equation to exponential equation.

Solve the exponential equation for y.

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