

Converting Between Logarithmic and Exponential Forms - Guided Lesson Explanation

When converting logarithmic to exponential form that equivalency can be best expressed as:

$$y = \log_b x \text{ is equivalent to } x = b^y$$

Explanation#1

Remember that the logarithm form stems from the exponent:

Hence,

$$x = b^y \text{ is } \log_b x = y$$

So logarithmic form of given exponential form is $\log_7 49 = 2$

Explanation#2

The logarithm form can be converted into its equivalent exponent form using the following relationship:

$$\log_b(x) = y \text{ is equivalent to } x = b^y$$

So exponential form of given logarithmic form is $3^3 = 27$

Explanation#3

The exponential form can be converted into its equivalent logarithmic form using the following relationship:

$$x = b^y \text{ is equivalent to } \log_b(x) = y$$

So logarithmic form of given exponential form is $\log_4 16 = 2$

