

Log (Inverses)

UNIT 8 LESSON _____ INVESTIGATION _____ NOTES

Lesson Vocabulary

Find Inverse of a log (y^{-1})

1. Write the log as an exponential.
2. Switch x and y .
3. Solve for y

ex.) Find the inverse.

$$a) y = \log_{\underset{b}{5}} \underset{y}{x}$$

$$x = 5^y$$

$$y^{-1} = 5^x$$

$$b) y = \log_{\underset{b}{10}} (\underset{y}{x+1})$$

$$x+1 = 10^y$$

$$y+1 = 10^x$$

$$y^{-1} = 10^x - 1$$

$$c) y = \log_{\underset{b}{2}} \underset{y}{2^x}$$

$$2^x = 2^y$$

$$2^y = 2^x$$

$$y^{-1} = \frac{2^x}{2}$$

$$y^{-1} = 2^{x-1}$$