

## Worksheet: Logarithmic Function

Find the value of  $y$ .

(1)  $\log_5 25 = y$

(2)  $\log_3 1 = y$

(3)  $\log_{16} 4 = y$

(4)  $\log_2 \frac{1}{8} = y$

(5)  $\log_5 1 = y$

Write the following equalities in exponential form.

(1)  $\log_3 81 = 4$   
|

(2)  $\log_7 7 = 1$   
|

(3)  $\log_{\frac{1}{2}} \frac{1}{8} = 3$   
|

(4)  $\log_3 1 = 0$   
|

Write the following equalities in logarithmic form.

(1)  $8^2 = 64$   
|

(2)  $10^3 = 10000$   
|

(3)  $4^{-2} = \frac{1}{16}$   
|

(4)  $3^{-4} = \frac{1}{81}$   
|