

## Logarithmic & Exponential Form

Variables: S1

**Express each equation in logarithmic form.**

1)  $6^m = 36$

2)  $x^{\frac{1}{2}} = 5$

3)  $9^5 = w$

4)  $4^{-k} = \frac{1}{16}$

5)  $5^b = 125$

7)  $8^{\frac{1}{3}} = s$

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**Express each equation in logarithmic form.**

9)  $\log_3 27 = n$

11)  $\log_6 z = 3$

13)  $\log_5 \left( \frac{1}{25} \right) = -y$

14)  $\log_x 100 = 2$

15)  $\log_{12} 144 = s$

16)  $\log_{36} p = \frac{1}{2}$

**Logarithmic & Exponential Form**

Variables: S1

**Express each equation in logarithmic form.**

1)  $6^m = 36$

$\log_6 36 = m$

2)  $x^{\frac{1}{2}} = 5$

$\log_x 5 = \frac{1}{2}$

3)  $9^5 = w$

$\log_9 w = 5$

4)  $4^{-k} = \frac{1}{16}$

$\log_4 \left( \frac{1}{16} \right) = -k$

5)  $5^b = 125$

$\log_5 125 = b$

7)  $8^{\frac{1}{3}} = s$

$\log_8 s = \frac{1}{3}$

**Express each equation in exponential form.**

9)  $\log_3 27 = n$

$3^n = 27$

11)  $\log_6 z = 3$

$6^3 = z$

13)  $\log_5 \left( \frac{1}{25} \right) = -y$

$5^{-y} = \frac{1}{25}$

15)  $\log_{12} 144 = s$

$12^s = 144$

14)  $\log_x 100 = 2$

$x^2 = 100$

16)  $\log_{36} p = \frac{1}{2}$

$36^{\frac{1}{2}} = p$

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