

A logarithm is just a special way to ask a specific question.


The QUESTION:

| Exponential Form | Logarithmic Form |
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|  |  |

Calculate the following logarithms.

| $\log _{4} 64$ | $\log _{6} 216$ |
| :--- | :--- |
| $\log _{4} 16$ | $\log _{3} \frac{1}{243}$ |
| $\log _{5} 125$ | $\log _{2} 4$ |
| $\log _{343} 7$ | $\log _{2} 16$ |
| $\log _{64} 4$ | $\log _{6} \frac{1}{216}$ |

Convert between exponential and logarithmic form.

$$
\begin{array}{ll}
\left(\frac{1}{5}\right)^{x}=y & \log _{u} \frac{15}{16}=v \\
9^{y}=x & \log _{\frac{7}{4}} x=y \\
6^{y}=x & \log _{u} v=-16 \\
b^{a}=123 & \log _{v} u=4 \\
u^{-14}=v & \log _{2} v=u \\
8^{b}=a & \log _{y} x=-8
\end{array}
$$

