

Evaluating Expressions

L1MS3

Example :

Evaluate the expression : $-3 \log_8 2$

$$\begin{aligned}
 -3 \log_8 2 &= \log_8 2^{-3} \\
 &= \log_8 8^{-1} \\
 &= (-1) \log_8 8 \\
 &= -1
 \end{aligned}$$

$$\log_a b^c = c \log_a b$$

$$\log_a a = 1$$

Evaluate each expression.

1) $-4 \log_{49} 7$

Answer

2) $\log_{25} 5$

3) $\log_{\frac{1}{2}} \left(\frac{1}{16} \right)$

Answer

5) $\log_{16} 4^{-6}$

Answer

7) $\log_{\frac{1}{2}} 512^{-1}$

Answer

9) $\log_{32} 2$

Answer

10) $\log_{\frac{1}{16}} \left(\frac{1}{256} \right)$

Answer

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