Name : _____   Score : _____

Evaluating Expressions

Example :

Evaluate the expression : $\log_{128} 2^{-3} - 4 \log_{\frac{1}{25}} \left(\frac{1}{5}\right)$

$$\log_{128} 2^{-3} - 4 \log_{\frac{1}{25}} \left(\frac{1}{5}\right) = -\frac{3}{7} \log_{128} 128 - \frac{4}{2} \log_{\frac{1}{25}} \left(\frac{1}{25}\right)$$

$$= -\frac{17}{7}$$

$\boxed{\log_a b^c = c \log_a b}$

$\boxed{\log_a a = 1}$

Evaluate each expression.

1) $\dfrac{2 \log_{27} 3}{9 \log_{64} 4}$

Answer

2) $\log_{\frac{1}{32}} 2 \cdot 5 \log_3 243$

3) $\log_{\frac{1}{36}} 6^3 + \log_2 12$

Answer

... 11

5) $\log_{\frac{1}{4}} \left(\frac{1}{64}\right) \cdot 9 \log$

Answer

7) $\log_{\frac{1}{6}} \left(\frac{1}{36}\right) - 5 \log$

Answer

...2

Answer

9) $\log_{\frac{1}{7}} \left(\frac{1}{49}\right) + 3 \log_{144} 12$

Answer

10) $\log_{\frac{1}{81}} \left(\frac{1}{3}\right) - 4 \log_9 3$

Answer

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