

Evaluating Expressions

L1ES4

Example :

Evaluate the expression : $\log_3 243$

$$\begin{aligned}\log_3 243 &= \log_3 3^5 \\ &= 5 \log_3 3 \\ &= 5 (1) \\ &= \mathbf{5}\end{aligned}$$

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

$$\log_a a = 1$$

Evaluate each expression.

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

Answer

2) $\log_2 32$

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3) $-3 \log_5 25$

Answer

5) $9 \log_8 2$

Answer

7) $\log_{13} 169$

Answer

Answer

9) $\log_6 \left(\frac{1}{6}\right)$

Answer

10) $\log_2 256$

Answer

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Answer

2) $\log_2 32$

5

3) $-3 \log_5 25$

Answer

-3

5) $9 \log_8 2$

Answer

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7) $\log_{13} 169$

Answer

2

10) $\log_2 256$

Answer

8

9) $\log_6 \left(\frac{1}{6}\right)$

Answer

-1

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