

## Evaluating Expressions

L1ES2

Example :

Evaluate the expression :  $\log_2 64$ 

$$\begin{aligned}\log_2 64 &= \log_2 2^6 \\ &= 6 \log_2 2 \\ &= 6(1) \\ &= \mathbf{6}\end{aligned}$$

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

$$\log_a a = 1$$

**Evaluate each expression.**

1)  $\log_3 81$

Answer

2)  $\log_6 \left(\frac{1}{216}\right)$

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3)  $\log_{11} 121$

Answer

5)  $-2 \log_5 25$

Answer

7)  $5 \log_3 3$

Answer

9)  $3 \log_8 2$

Answer

10)  $-3 \log_3 9$

Answer

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**-3**

3)  $\log_{11} 121$

Answer

**6**

5)  $-2 \log_5 25$

Answer

**-1**

7)  $5 \log_3 3$

Answer

**5**

Answer

**7**

9)  $3 \log_8 2$

Answer

**1**

10)  $-3 \log_3 9$

Answer

**-6****PREVIEW**

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