



Precalculus: Logarithmic and Exponential Functions

Name _____ Date _____

Evaluate the following expressions

(1) $\log(\sqrt[4]{1000})$

(2) $\log_4(\sqrt[7]{16})$

(3) $\log(10,000)$

(4) $\log_2(\sqrt[7]{32})$

(5) $\log(1,000,000)$

(6) $\log(\sqrt[3]{100})$

(7) $\log_7(\sqrt[5]{2,401})$

(8) $\log_9(\sqrt[7]{729})$

(9) $\log(\sqrt[5]{10000000})$

(10) $\log_8(\sqrt[7]{8})$

(11) $\log_4(64)$

(12) $\log(0,0000000000000001)$



Answers

Evaluate the following expressions

(1) $\log(\sqrt[4]{1000})$

$\frac{3}{4}$

(3) $\log(10,000)$

4

(5) $\log(1,000,000)$

6

(7) $\log_7(\sqrt[5]{2,401})$

$\frac{4}{5}$

(9) $\log(\sqrt[5]{10000000})$

$\frac{7}{5}$

(11) $\log_4(64)$

3

(2) $\log_4(\sqrt[7]{16})$

$\frac{2}{7}$

(4) $\log_2(\sqrt[7]{32})$

$\frac{5}{7}$

(6) $\log(\sqrt[3]{100})$

$\frac{2}{3}$

(8) $\log_9(\sqrt[7]{729})$

$\frac{3}{7}$

(10) $\log_8(\sqrt[7]{8})$

$\frac{1}{7}$

(12) $\log(0,0000000000000001)$

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