

Worksheet 38 - Lesson 99

Date _____ Period _____

Use a calculator to approximate each to the nearest thousandth.

1) $\log_2 1.547$

2) $\log_3 49$

3) $\log_3 3.4$

4) $\log_6 -2.83$

5) $\log_7 30$

6) $\log_4 3.8$

7) Solve for x : $\log_n \log_n x = 2$

8) Solve for x : $\log_n \sqrt[4]{x} = \sqrt[4]{\log_n x}$

Given two terms in a geometric sequence find the common ratio and the explicit formula.

9) $a_6 = 2048$ and $a_1 = 2$

10) $a_3 = -12$ and $a_2 = -6$

Find the missing term or terms in each geometric sequence.

11) ..., -3, ____, ____, ____, -768, ...

12) ..., 4, ____, ____, ____, ____, 128, ...

13) The positive geometric mean of two numbers is 9, and the difference of the two numbers is 24. Find the numbers.

14) Find the fourth term in the geometric progression that begins $1 + \sqrt{2}, 3 + 2\sqrt{2}, \dots$

15) Find both the arithmetic and geometric mean for 8 and 22.

16) A ball is dropped from a height of 128 feet. After each bounce, it rebounds one half of the distance it fell. How far does the ball fall on its fourth fall?