

Unit #2: Logarithms

Topic: Solving Log Equations

Objective: *SWBAT solve an equation by using properties of logarithms.*

Warm Up #4:

Does $\ln 600 = 3\ln 2 + \ln 3 + 2\ln 5$? Justify your answer.

What would the $\ln 630 = ?$

To solve a logarithmic equation:

1)

2)

3)

Example #1: Solve for x : $\log_4(x^2 - 3x - 2) = 2$

Example #2: Solve for x : $\log_2(4x + 10) - \log_2(x + 1) = 3$



Assignment(s): Complete practice problems #1 – 16
Weekly Review #2 Due Wednesday 9/30

Problem Set #4: Solve each of the following logarithmic equations.

1) $\ln\sqrt{x+2} = 1$

2) $\ln(x+3) + \ln(x-3) = \ln 16$

3) $2\log_3 x - \log_3(x-2) = 2$

4) $\log_{(x-5)} 343 = 3$

$$5) \log_2(x - 1) + 6 = 9$$

$$6) \log_2(x - 3) + \log_2(x + 1) = 5$$

$$7) \log_3 x + \log_3(x - 8) = 2$$

$$8) \log_2(x + 5) - \log_2(x - 2) = 3$$

$$9) 7\log_4(0.6x) = 12$$

$$10) \ln(x^2 + 1) = 8$$

11) $\ln(x + 5) = \ln(x - 1) - \ln(x + 1)$

12) $\log_2(2x - 1) + \log_2(x + 7) = 3$

13) $\ln(x + 11) - \ln(x - 3) = \ln 3$

14) $\log_3(2x - 5) = \log_3(x - 1)$

15) $4\log(x - 6) = 11$

16) $\log_4(x^2 + 3x) - \log_4(x + 5) = 1$

