



Math Virtual Learning

College Algebra

April 28, 2020



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Lesson: April 28, 2020

Objective/Learning Target: Students will identify and solve logarithmic equations



Warm Up Activity:

Practice the problems at the link to refresh your skills on properties of logarithms.

[Skill Practice](#)

Lesson:

Watch the video until 11:55. We encourage you to have your own sheet of paper out and work along with the video

Google

Equations

STEPS to Solving Exponentials:

Simple: $(2^{x-1} = 32)$

Complicated: $3e^{2x} + 5 = 31$

- ① make both sides have the same base.
- ② set exponents equal and solve

$2^{x-1} = 2^5$

$x-1 = 5$

$x = 6$



Practice: Click on the different links and work the interactive problems, you will need your own sheet of paper to work along the problems

[Practice 1](#)

[Practice 2](#)

Additional Practice:

42. Solve for x: $\ln(x + 5) = \ln(x - 1) - \ln(x + 1)$

- a. $\{-2, -3\}$ b. No Solution c. $\{3\}$ d. $\{2, 3\}$

43. Solve for x: $\log_4 x - \log_4(x - 1) = \frac{1}{2}$

- a. $\{1, 2\}$ b. No Solution c. $\{2\}$ d. $\{-2\}$

[Work Problems 42 & 43 -- click and scroll down for answers](#)

Additional Practice:

61. Solve: $\log_2 x + \log_2(x-4) = 2$

66. Solve: $\log_2 x + \log_2(x+2) = \log_2(x+6)$

68. Solve: $\log_5 x = -3$

[Work Problem 61, 66, & 68-- click and scroll down for answers](#)

Additional Practice Answers:

42. B

43. C

61. $2 + 2\sqrt{2}$

66. $x = 2$

68. $x = \frac{1}{125}$