

Precalculus

Lesson 5.6: Logarithmic and Exponential Equations

Mrs. Snow, Instructor

We are now able to apply the previous lessons' formulas to solving logarithmic and exponential equations using algebraic techniques.

Solve:

$$2\log_5 x = \log_5 9$$

$$\log_5(x + 6) + \log_5(x + 2) = 1$$

$$\ln x + \ln(x - 4) = \ln(x + 6)$$

$$2^x = 5$$

Exponential equation:

$$8 \cdot 3^x = 5$$

$$5^{x-2} = 3^{3x+2}$$

Quadratic form

$$4^x - 2^x - 12 = 0$$



Using a calculator:

$$x + e^x = 2$$