

12.4 Exponential and Logarithmic Equations

Example 12.4.1

Solve the following equation:

$$5^{3x-6} = 125$$

Example 12.4.2

Solve the following equation:

$$4^x = 32$$

Example 12.4.3

Solve the following equation:

$$5^x = 134$$

Example 12.4.4

Solve the following equation:

$$10^x = 8000$$

Example 12.4.5

Solve the following equation:

$$\log_2 (x - 4) = 3$$

Example 12.4.6

Solve the following equation:

$$\log (x) + \log (x - 3) = 1$$

Example 12.4.7

Solve the following equation:

$$\ln(x + 2) - \ln(4x + 3) = \ln\left(\frac{1}{x}\right)$$

Example 12.4.8

Solve the following equation:

$$\ln(x - 3) = \ln(7x - 23) - \ln(x + 1)$$