Precalculus

3-04 Solving Exponential and Logarithmic Equations

Solve Exponential Equations

Shortcut Method
1-to-1 method (rewrite with the same base)

$\left(\frac{1}{5}\right)^{x} = 125$

General Method
_____of both sides

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

$6(2^{t+5}) + 4 = 11$

$e^{2x} - 7e^{x} + 12 = 0$

Logarithmic Equations

Shortcut Method
1-to-1 Property

$\ln x - \ln 3 = 0$

General Method

_____ both sides

$6 + 3\ln x = 4$

$\log_4 x + \log_4(x - 9) = 1$

Graphical method

If the other methods don't apply

- Make _____
- Find the _____

Solve $\log_2 x = \ln 2x$