

Name: Date:

solve for a	solve for x	solve for x
$\text{Ln}\left(\frac{a}{b}\right) = c$ $a = e^{(c + \ln b)}$ $a = be^c$	$\text{Ln}(e^a) = c + d^x$ $a = c + d^x$ $x = \log(a - c) / \log b$ <p style="text-align: center;">or</p> $x = \ln(a - c) / \ln b$	$e^x = b$ $\ln e^x = \ln b$ $x = \ln b$
simplify		
$z = \ln \frac{x^2}{y} x^{-0.75} y^{2x}$	$z = \ln x^2 - \ln y + \ln x^{-0.75} + \ln y^{2x}$ $z = 2 \ln x - \ln y - 0.75 \ln x + 2x \ln y$ $z = \ln x(2 - 0.75) + \ln y(2x - 1)$ $z = 1.25 \ln x + \ln y(2x - 1)$	
solve for y		
$\text{Ln}(xy) = \frac{b}{c}$	$\ln x + \ln y = b/c$ $y = e^{b/c} / x$	
Solve (by log and express in scientific notation):		
$y = 15^6$	$\log y = 6 \log 15$ $\log y = 7.056$ $y = 10^{7.056} = 10^{0.056} \times 10^7 = 1.14 \times 10^7$	