

Lesson	Example Problems
5.1 Intro to Exponential Functions	1. Find the transformations from the parent functions, domain, range, asymptote and end behavior for the following function. $f(x) = (2)^{x-3} - 7$  2. Solve for x: $3^{2x+5} = 27^x$
5.2 Intro to Logarithmic Functions	3. Find the transformations from the parent functions, domain, range, asymptote and end behavior for the following function. $f(x) = \log(x-5) - 2$  4. Solve for x: $\log(x^2) = \log(7x-12)$
5.3 Converting between Exponential and Logarithmic Forms	Solve for x: 5. $\log_x 32 = 5$  6. $\log_2 \left( 1 + \frac{x}{2} \right) = 4$

<p>5.4 Properties of Logarithms</p>	<p>7. Simplify to a single answer (term): <math>\log_4(2) + \log_4(8) + 2</math></p> <p>8. Given <math>\log_n b = 12</math>, <math>\log_n c = 3</math> find <math>\log_n \left( \frac{c}{b^2} \right)</math></p>
<p>5.5 Solving Logarithmic Equations</p>	<p>Solve for x:</p> <p>9. <math>\log_6(x+2) = 1 + \log_6(x-3)</math>                      10. <math>\log_7(x-5) + \log_7(x+1) = 1</math></p>
<p>5.6 Solving Exponential Equations</p>	<p>Solve for x:</p> <p>11. <math>2.4^{3x+1} = 9</math></p>
<p>5.7 Natural Logarithms and Base e</p>	<p>Solve for x:</p> <p>12. <math>3\ln x + 2\ln 2 = \ln 64</math>                      13. <math>e^{x-2} + 4 = 21</math>                      14. <math>\ln 2 + \ln x = 3</math></p>