

Logs Review (Assignment 43)

Solve for x . Round decimal answers to the nearest thousandth.

1. $2^x = 3^{x-1}$

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

3. $9 = 4^x$

4. $\log_2 x + \log_2(x - 2) = 3$

5. $5 \cdot 5^x = 10^{x+6}$

6. $(\log_3 x)^2 = 4$

7. $e^{4x-2} = 12^{x+3}$

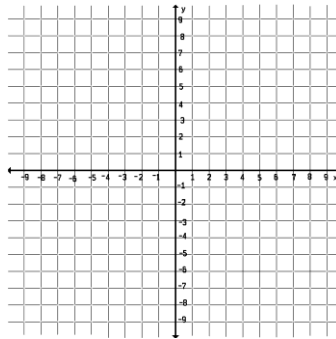
8. $3^x = 2 \cdot 7^{x-5}$

9. $\frac{1}{2} \cdot 3^x - 8 = \ln 2$

10. $3 \log x = \log(2x^2 + 3x)$

11. a) Graph (with the table of values) the exponential function $f(x) = 2^x - 3$ and state its domain and range.

x	$f(x)$



Domain:

Range:

b) Find $f^{-1}(x)$ (...referring to $f(x)$ from part a).

c) Go back to part a and graph $f^{-1}(x)$ on the same coordinate plane as $f(x)$ by first filling out the table of values below. What are the domain and range of $f^{-1}(x)$?

x	$f^{-1}(x)$

Domain:

Range: