

Pg. 246 3.4 – Exponential and Logarithmic Equations

Ex 1:

Solve for x.

a) $\left(\frac{1}{4}\right)^x = 64$

b) $\ln x - \ln 5 = 0$

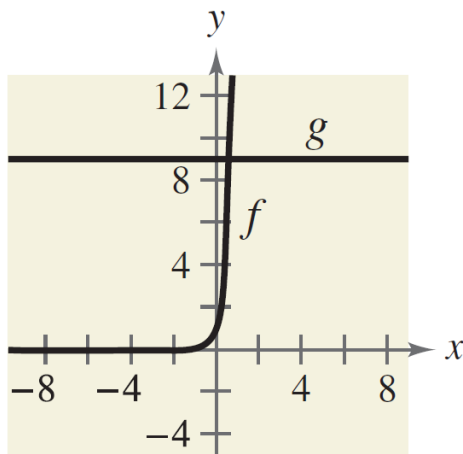
c) $e^x = 4$

Ex 2:

Solve the equation $f(x) = g(x)$ algebraically to determine the point of intersection of the graphs of f and g.

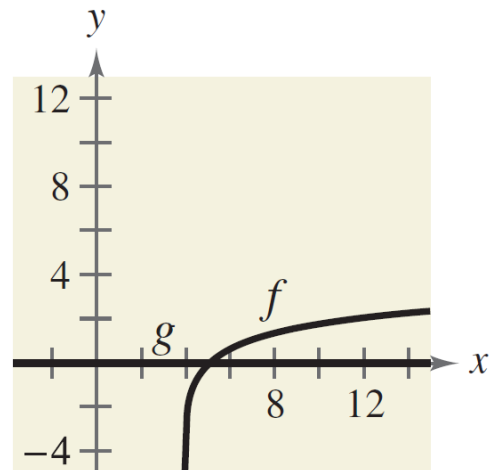
a) $f(x) = 27^x$

$g(x) = 9$



b) $f(x) = \ln(x - 4)$

$g(x) = 0$



Ex 3:

Solve.

a) $e^{2x} - 5e^x + 6 = 0$

b) $\frac{400}{1+e^{-x}} = 350$

c) $\ln \sqrt{x-8} = 5$

d) $\log_2 x + \log_2 (x+2) = \log_2 (x+6)$

Ex 4:

\$2,500 is invested in an account at interest rate of 12%, compounded continuously. Find the time required for the amount to double.

Assignment 3.4

Pg. 253 Vocab #'s 1-3 Problem Set #'s 1-115 ODD

REQUIRED: Vocab, 3, 11, 13, 21, 23, 25, 33, 35, 57, 59, 77, 83, 93, 109, 113