# C12 - 8.5 - Log Operation HW

Solve using your calculator or your brain.

$log5 =$

$log10 =$

$log240 =$

$log0 =$

$log100 =$

$log4528 =$

$log1 =$

$log0.2 =$

$log20 =$

$log-1 =$

$log1000 =$

$log9 =$

$log.01 =$

$log85 =$

$log0.1 =$

$log12345 =$

$log10^{12345} =$

$log_5 12 =$

$log_8 3 =$

$log_2 8192 =$

$log_2 128 =$

$log12^3 =$

$log25^2 =$

$log100^2 =$

$log10^{-2} =$

$2log6^4 =$

$-log5^2 =$

$3log6^{-4} =$

$2log10^{\frac{1}{2}} =$

$3log12 =$

$2log25 =$

$2log100 =$

$-2log10 =$

*Expand: Bring Exponent down in front and distribute*

$log3^{x+4} =$

$log8^{2x-1} =$

$log8^{-x+1} =$

$2log4^{x+2} =$

Remove a greatest common Factor of $x$

$2xlog5 - xlog3 =$

$xlog7 - xlog2 =$

$xlog20 - xlog2 =$

# C12 - 8.5 - Log = Log De-Log Equation HW

$log\,2x = \log(x+1)$

$log_2 x = \log_2(3-x)$

$log\,x = \log(2x+1)$

$log\,x = \log(x^2-2)$

$log\,2x = \log(x-3)$

$\log_5(4x+3) = \log_5(3x-2)$

$log6 = logx - log3$

$log24 = logx + log3$

$log8 = log2 - logx$

$log\,x + logx = log4$

$\log_4 x + \log_4 x^2 = \log_4 27$

$\log_7 3x = \log_7(x^2-4)$

$log\,x^2 + logx^2 = log81$

$3\,log\,x + logx = log256$

$2\,log\,x + logx^2 = log9$

$log\,x^2 - logx = log5$

$3\log_7 x + \log_7 x^2 = \log_7 32$

$5\log_9 x - \log_9 x^2 = \log_8 8$

$3\log_9 x + \log_9 x^2 = \log_9 32$

$\log_3(x-2) + \log_3(x-3) = log12$

$\log_3(6x+1) - \log_3(x-1) = log5$

$\log_3(3x+1) - \log_3(x-2) = log4$

# C12 - 8.5 - Log Equation HW

$\log_2 x + \log_2 x = 2$

$\log_4 x = 3 - \log_4 x$

$\log_2 x + \log_2 x^2 = 6$

$2\log_2 x - \log_2(x-2) = 3$

$\log_x 5 + \log_x 2 = 3$

$\log_{x^2} 128 = \log_{x^2} 2 + 3$

$\log_5(x^2 - 1) = \log_5(x+1) + 2$

$\log_{x+1} 27 - \log_{x+1} 3 = 2$

$\log_2 5x - \log_2(x+1) = 2$

$\log_{x-1} 1 + \log_{x-1} 4 = 2$

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

$\log_2 x - 2 = -\log_2(x+2)$

$\log_3 2x - \log_3(x-2) = 1$

$\log_3(3x - 12) - \log_3 x = 2$

# C12 - 8.5 - Log Equation HW

$\log_3 2x - \log_3(x - 2) = 1$

$\log_3(3x - 12) - 2 = \log_3 x$

$\log_2 x + \log_2(x - 7) = 3$

$\log_2 x + \log_2(x + 1) = 1$

$\log_2(2x + 4) = \log_2(x + 2) + 2$

$\log_2 x + \log_2(x + 4) = 5$

$\log_3 x + \log_3(x + 2) = 1$

$\log_3 x + \log_3(x - 6) = 3$

$\log_6 x + \log_6(x - 5) = 2$

$\log_3(x^2 + 5x + 6) - \log_3(x + 2) = 1$

$2\log_5(x + 2) - \log_5(x + 2) = 1$

$\log_7(2x^2 + 7x + 6) - \log_7(x + 2) = 2$

# C12 - 8.5 - Logs Factoring WS

$(logx)^2 + logx = 2$

$(logx)^2 = logx^5 + 4$

$2(logx)^2 - 3logx = -1$

$(logx)^2 - 9 = 0$

$(logx)^2 = 4$

$(logx)^2 - 7 = logx^6$