Solving Logarithmic Equations
8.3/8.4/8.5

Solve for x, $\log_3(5x + 6) = 2$

Solve for x, $\log_{10}(x + 1) = 1$

What are the 3 rules for working with exponents?

Below are the three rules for working with logarithms.

$\log_a x + \log_a y = \log_a (xy)$

$\log_a x - \log_a y = \log_a (x/y)$

$\log_a x^b = b \log_a x$

Make up a question for each rule to show that they are true.

Solve $3^x = 7$

TWO WAYS

A collector coin's value is $300. Its value increases 5% per year. When will the value of the coin be $600?

Ms. Thangaraj buys a car for $27 500. Its value depreciates 17% per year. When will the value of the car be $15 000?

Solve $4^x = 8^{x+3}$

TWO WAYS

Solve (hint: factor)

$2^{x+2} - 2^x = 12$

Homework:

Pg 485 #2, 3, 7, 8,10,11

Pg 475 #2,4,6,10