

## Solving Logarithmic Equations

Name \_\_\_\_\_

Log=Log

|                                   |   |
|-----------------------------------|---|
| $\log_{13}(-5n + 3) = \log_{13}3$ | $\log_{16}(8 - 3n) = \log_{16}5n$         |
| $\log_3(8 - n) = \log_3(4 - 4n)$  | $\log_{17}(x^2 + 2) = \log_{17}(-6x + 2)$ |

Three Logs

|                                      |  |
|--------------------------------------|--|
| $\log_8x + \log_8(x + 8) = \log_848$ | $\log(x + 1) - \log x = \log 18$       |
| $\log_93 + \log_9(-4x) = \log_95$    | $\log_710 + \log_7(x - 10) = \log_757$ |

Two Logs on one side

$$\log 2x^2 - \log 2 = 4$$

$$\log(x + 4) - \log x = 1$$

$$\log_9 5 - \log_9(x - 3) = 1$$

$$\log_6(x^2 + 2) + \log_6 3 = 1$$