

Name \_\_\_\_\_ Algebra 2 Logarithm worksheet

**Solve each equation**

1.  $\log_2(3x-2) = \log_2(2x+6)$

2.  $\log_4(1-2x) = \log_4(x+10)$

3.  $\log_4(1-2x) + \log_4 3 = \log_4 9$

4.  $2^x = 256$

5.  $4^{3y} = 8^{y-3}$

6.  $\log_5 x - \log_5 10 = \log_5 4.2$

Rewrite using logs:

7)  $2^x = 30$

8)  $5^3 = 125$

9)  $a^b = c$

Solve: 10)  $5^x = 25$

11)  $27^x = 9$

12)  $27^x = 9$

13)  $\log_7 x = 2$

14)  $x^2 - 4 = 0$

15)  $2y^2 - 72 = 0$

16)  $a^3 = -8$