Pre-Calculus AB

Name_____

Worksheet 20 - Lesson 59

Date_____ Period_____

1) Solve the equation for x exactly:
$\ln(4x - 5) = 0$

2) Solve the equation for x exactly:
$3 - \log_2(x - 1) = 0$

3) Solve the equation for x exactly:
$\log(x^2 - 3x) = 1$

4) Solve the equation for x exactly:
$\log_3 x + \log_3(x + 6) = 3$

5) Solve the equation for x exactly:
$1 + \log(3x - 1) = \log(2x + 1)$

6) Solve the equation for x exactly:
$\log_2(x^2 - x - 2) = 2$

7) Solve the equation for x exactly:
$\ln \ln x = 3$

8) Solve for x exactly:

$$2\log_b x = 2\log_b(1-a) + 2\log_b(1+a) - \log_b\left(\frac{1}{a} - a\right)^2$$

9) Solve for x exactly:

$$\log_b x = 2 - a + \log_b \frac{a^2 b^a}{b^2}$$

10) Evaluate: $\log_{49} 7 - \log_8 64$

11) Simplify: $43^{\log_{43} 6}$

12) Simplify: $2^{\log_2 5 + \log_2 6}$

13) Simplify: $3^{\frac{1}{2} \cdot \log_3 4 - \log_3 7}$