

NAME: \_\_\_\_\_ Score \_\_\_\_\_ /10  
Please **print** your name

1. What is the rule for the exponential function base 43? **Be sure to write your response as a rule.**  
The rule for the exponential function base 43 is  $\exp_{43}(x) = 43^x$

2. What is the inverse of  $\exp_3$ ?  
The inverse of  $\exp_3$  is  $\log_3$

3. Evaluate  $\exp \circ \ln(\sqrt{5}) = 5$

4. Solve the equation  $3 + e^x = 5$   
 $3 + e^x = 5$   
 $e^x = 2$   
 $x = \ln \circ \exp(x) = \ln(2)$

5. Solve the equation  $\ln(3x - 5) = 1$   
 $\ln(3x - 5) = 1$   
 $\exp \circ \ln(3x - 5) = \exp(1)$   
 $3x - 5 = e$   
 $3x = e + 5$   
 $x = \frac{e + 5}{3}$