

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

Please **print** your name**SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION**

1. Write the rule for the  $\exp_8$  function.

$$\exp_8(x) = 8^x$$

2. Evaluate  $\exp_3(4)$ .

$$\exp_3(4) = 3^4 = 81$$

3. Write the name of the inverse of  $\exp_{12}$  ?

The name is  $\log_{12}$

4. Write the name and the rule for the inverse of  $\log_5$ .

The name is  $\exp_5$

The rule is  $\exp_5(x) = 5^x$

5. Solve the equation  $\ln(2x + 11) = 2$ . SHOW your work. NO decimal approximations.

$$\ln(2x + 11) = 2$$

$$\exp(\ln(2x + 11)) = \exp(2)$$

$$2x + 11 = e^2$$

$$2x = e^2 - 11$$

$$x = \frac{e^2 - 11}{2}$$

