

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

**Use the methods demonstrated in class.****Use the fact that exponential and logarithmic functions with the same base are inverses.**

1. Solve the equation  $e^{5x-3} - 2 = 10,476$

$$\exp(5x - 3) - 2 = 10,476$$

$$\ln \circ \exp(5x - 3) = \ln(10,478)$$

$$5x - 3 = \ln(10,478)$$

$$x = \frac{3 + \ln(10,478)}{5}$$

2. Solve the equation  $\ln(x + 4) = \ln(x) + \ln(4)$

$$\ln(x + 4) = \ln(x) + \ln(4)$$

$$\ln(x + 4) = \ln(4x)$$

$$\exp \circ \ln(x + 4) = \exp \circ \ln(4x)$$

$$x + 4 = 4x$$

$$x = \frac{4}{3}$$