

# SI Worksheet 11

## Exponential Functions

Solve for x.

1)  $3^x = 81$

2)  $6^x = 216$

3)  $10^{x-3} = 100$

4)  $-2e^{7x+5} - 10 = -17$

## Logarithmic Functions

Solve for x.

5)  $2\log_7(-2x) = 0$

6)  $-10 + \log_3(x + 3) = -10$

7)  $-6\log_3(x - 3) = -24$

8)  $\log_9(-11x + 2) = \log_9(x^2 + 30)$

## Exponential and Logarithmic Functions

Find the inverse of the equation, then graph the original and the inverse.

9)  $y = 2^{x+3} - 1$

10)  $y = \log_2(x + 1) + 2$