

## MATH 111 WORKSHEET 9

1. Solve for  $x$ .

$$\log_2 x + \log_2(x - 7) = 3$$

2. Solve for  $x$ .

$$\log(x - 3) = 1 - \log x$$

3. Solve for  $x$ .

$$3 \ln(2x) = 12$$

2

4. Solve for  $x$ .

$$40e^{0.6x} = 240$$

5. Solve for  $x$ .

$$5^{4x-7} - 3 = 10$$

6. Solve for  $x$ .

$$4^{3x+1} = 8^{x+5}$$

7. Solve for  $x$ .

$$2(7^{x+2}) - 15 = 27$$

8. Solve for  $x$ .

$$\log_4(x + 3) = 1 - \log_4(2 - x)$$

9. Solve for  $x$ .

$$\log_2(x - 6) + \log_2(x - 4) - \log_2 x = 2$$

**10.** At what annual rate compounded continuously will \$1,000 have to be invested to amount to \$2,500 in 10 years?

**11.** Solve for  $I$  in terms of the other variables.

$$D = 5 \log \left( \frac{I}{P} \right)$$

**12.** Solve for  $A$  in terms of the other variables.

$$t = \frac{-1}{k} (\ln A - \ln P)$$