

MATH 111 WORKSHEET 9

Show all work for full credit.

1. Solve for x .

$$\log_2(x + 3) = 2 - \log_2(2 - x)$$

2. Solve for x .

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

3. Solve for x .

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

4. Solve for x .

$$\log_4(x - 6) + \log_4(x - 4) - \log_4 x = 1$$

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5. Solve for x .

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

6. Solve for x .

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

7. Solve for x .

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

8. Solve for A in terms of the other variables.

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

9. Complete the table of values.

a. $f(x)$ is a *linear* function.

| | | | | | |
|--------|----|----|---|----|----|
| x | 5 | 7 | 9 | 11 | 13 |
| $f(x)$ | 25 | 30 | | | |

b. $g(x)$ is an *exponential* function.

| | | | | | |
|--------|----|----|----|----|----|
| x | 2 | 6 | 10 | 14 | 18 |
| $g(x)$ | 25 | 35 | | | |