

# LOGARITHMIC EQUATION

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

## ANSWERS

1a \_\_\_\_\_

1b \_\_\_\_\_

2a \_\_\_\_\_

2b \_\_\_\_\_

3a \_\_\_\_\_

3b \_\_\_\_\_

4a \_\_\_\_\_

4b \_\_\_\_\_

5a \_\_\_\_\_

5b \_\_\_\_\_

Evaluate the followings.

1. a.  $2,5^{\log_3 x} + 0,4^{\log_3 x} = 2,9$

b.  $4^{2\log_8(2x-2)} \cdot 0,25^{\log_8(2x-3)} = \sqrt[3]{16}$

2. a.  $\log_5 \sqrt{x-9} - \log_5 10 + \log_5 \sqrt{2x-1} = 0$

b.  $\log_2 182 - 2\log_2 \sqrt{5-x} = \log_2(11-x) + 1$

3. a.  $(x^2 - 4)\log_3(1 - x^2 - 3x) = 0$

b.  $(x^2 - x - 2)\log_2(x^2 - 4x + 4) = 0$

4. a.  $\log_3(3^x - 8) = 2 - x$

b.  $\log_7(6 + 7^{-x}) = 1 + x$

5. a.  $0,5 \log_{1-x}(x^2 + 3x - 4)^2 = 1$

b.  $0,5 \log_{2-x}(x^2 + x - 6)^2 = 2$