

Exponents and Logarithms Solving Mixed Practice

Name: \_\_\_\_\_

Solve.

1.  $6^x = 17$

2.  $2^{3x} = 4^{x+2}$

3.  $\log_5(x^2 + 9) = 2$

4.  $\log(3x - 5) + \log x = \log 2$

5.  $4^{2x-5} = 27$

6.  $25^{2x} = 125^{x+2}$

7.  $\log_8(x + 10) - \log_8(x - 1) = \log_8 12$

8.  $82 = 3^{x-4}$

$$9. 5^{x^2-3} = 72$$

$$10. \log_2 x + 2\log_2 5 = 0$$

$$11. \log_6 4 + 2\log_6 x = 2$$

$$12. 2^{3x+1} = 5^x$$

$$13. 7^{2x+3} = 8^{x+4}$$

$$14. \log_7 x + 2\log_7 x - \log_7 3 = \log_7 72$$

$$* \log_3(\sqrt{-7x+1}) - 7 = -4$$