

## 5.4 Solving Exponential and Logarithmic Equations Block: \_\_\_\_\_ Mark Out Of 22 \_\_\_\_\_

**Solve each equation.**

1)  $3^{-3k-3} = 27$

2)  $125^{3r} \cdot 25^{2r-1} = 5^3$

**Solve each equation. Round your answers to the nearest ten-thousandth.**

3)  $-9 \cdot 4^{0.9r} + 1.6 = -33.5$

4)  $-9 \cdot 11^{7m-5} = -32$

**Solve each equation.**

5)  $\log(2v + 5) = \log(5v - 10)$

$$6) \log_8 (x^2 + 93) = \log_8 (19x + 3)$$

$$7) 9\log_2 -3n = 0$$

$$8) \log_6 (x - 6) + \log_6 8 = 4$$

$$9) \log_9 (x + 6) - \log_9 x = 1$$

$$10) \log_4 (4x^2 - 4) - \log_4 3 = 1$$

$$11) \log_4 (x - 1) + \log_4 (x + 12) = \log_4 30$$