

Name : \_\_\_\_\_ Score : \_\_\_\_\_  
Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

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### Logarithmic Equations

Solve each given equation.

1)  $\log 9q = \log (4q - 6)$

8)  $\log_7 (5x + 3) = \log_7 (9x - 9)$

2)  $\log_4 (5x + 10) = \log_4 (9x + 3)$

9)  $\log_2 n + \log_2 4 = 2$

3)  $\log_3 s + \log_3 3 = 2$

10)  $\log_5 n + \log_5 8 = \log_5 10$

4)  $\log q + \log 6 = \log 4$

11)  $\log_5 8 + \log_5 4w^2 = \log_5 4$

5)  $\log_6 9 + \log_6 3w^2 = \log_6 7$

12)  $\log_9 (9b^2 + 243) = \log_9 108$

6)  $\log_3 (5p^2 + 180) = \log_3 65$

13)  $\log_8 8r = \log_8 (5r + 7)$

7)  $\log_4 2q = \log_4 (6q + 7)$

14)  $\log_7 (7p + 5) = \log_7 (5p - 9)$

